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May, 1952

SOAP and Sanitary Chemicals

In this issue...

Hints on improving kettle house operating practices

• • •

Modern floor polishes—new developments reviewed

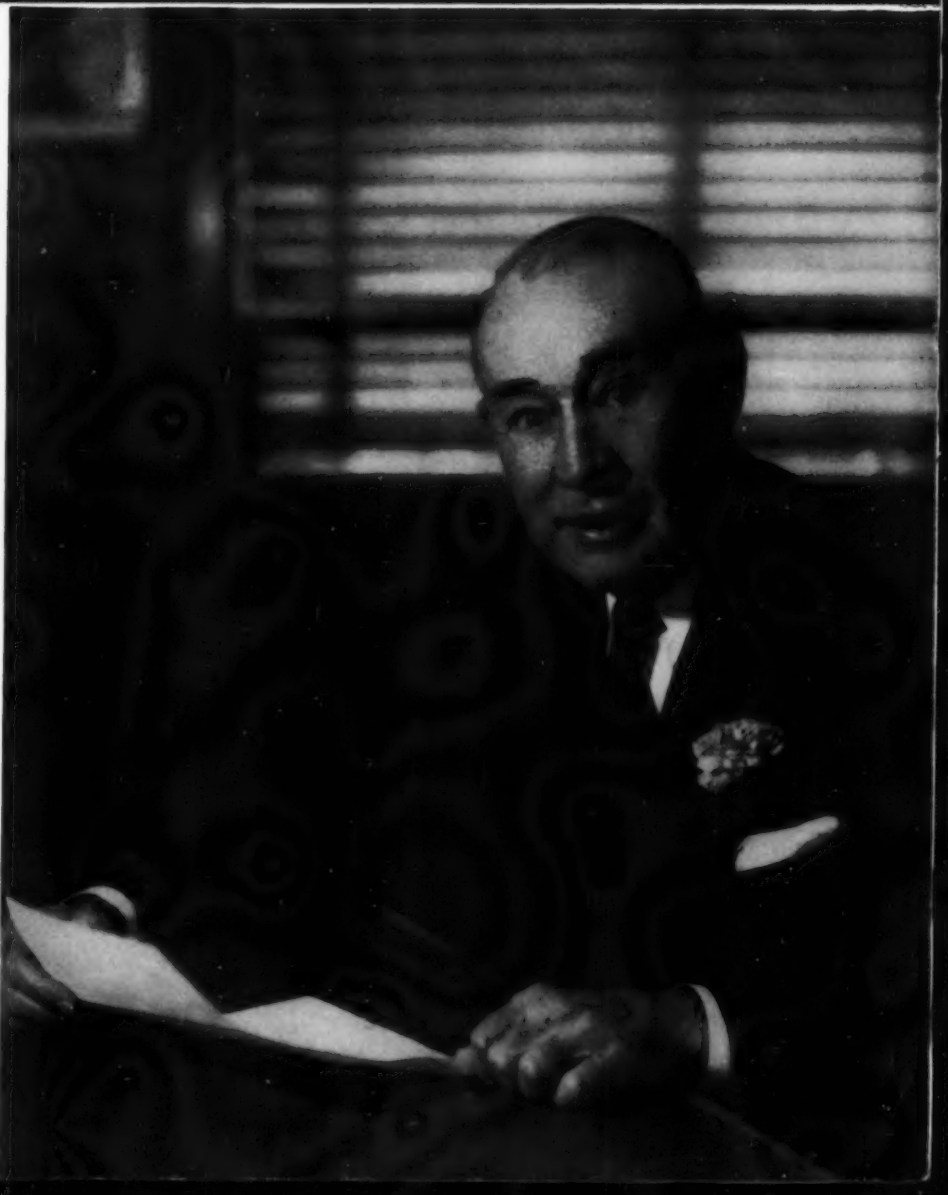
• • •

Lever formally opens new headquarters in New York

• • •

Increased sanitary supply sales through specialization

• • •



E. M. Finehout, recently elected president of White King Soap Co., sales organization of Los Angeles Soap Co., has been with the latter firm for nearly 50 years. He is chairman of the board of Los Angeles Soap Co. and its executive vice-president. Mr. Finehout is active in the affairs of the Association of American Soap & Glycerine Producers and is far west vice-president.

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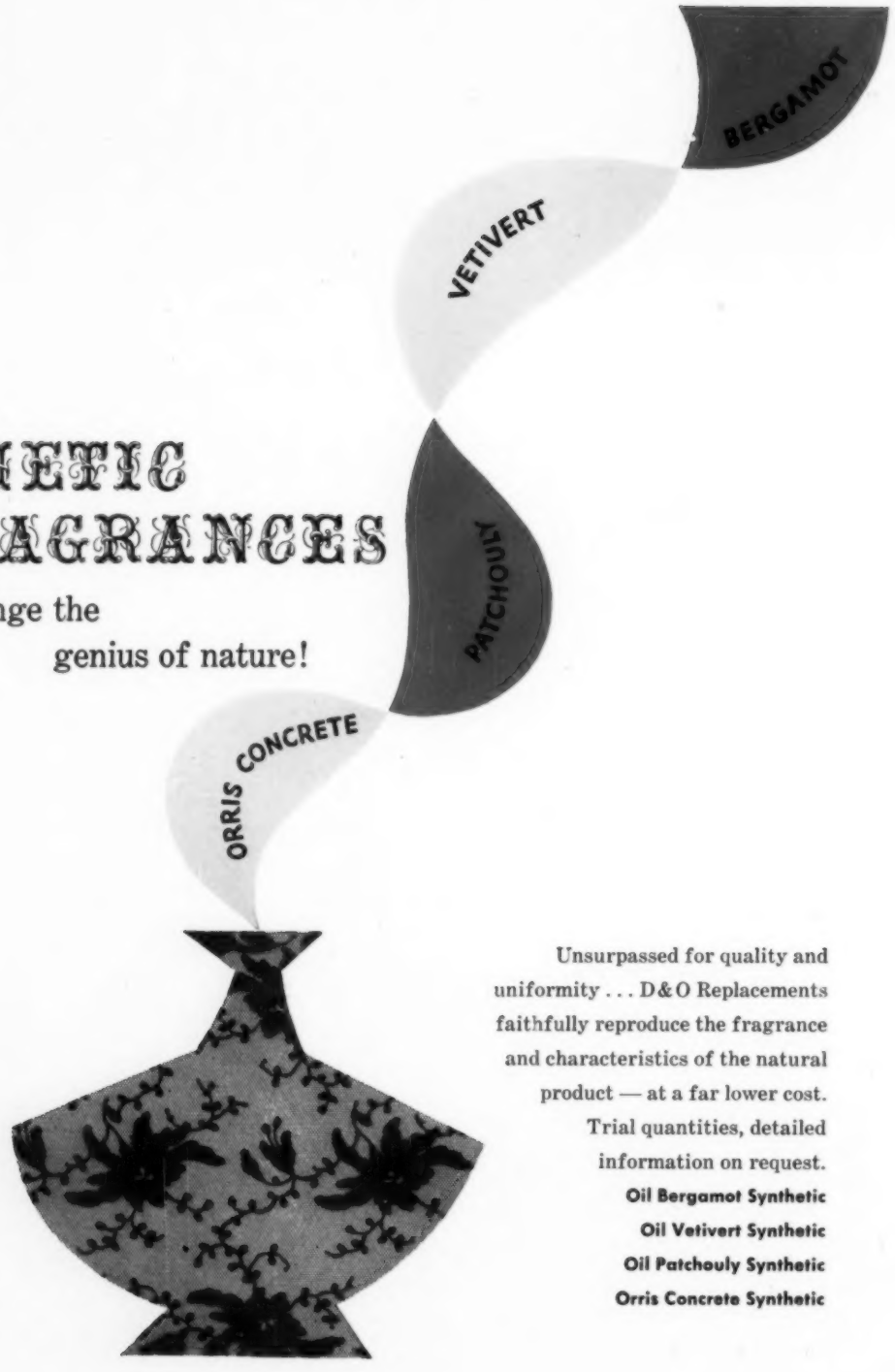
to challenge the genius of nature!



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pulling together

There are 5 combined properties—and actions—in Santomerse No. 1 that have established it as one of the most effective detergents and wetting agents suitable for use by formulators of cleaning compounds.

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Use Santomerse No. 1 to put combined, all-purpose action in your detergent cleaner. It is available in flake, powder and granular form . . . MONSANTO CHEMICAL COMPANY, Phosphate Division, 1700 South Second Street, St. Louis 4, Missouri

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1. *Detergency*
2. *Sudsing*
3. *Wetting Out*
4. *Emulsifying*
5. *Dispersing*

SANTOMERSE No. 1

MONSANTO
CHEMICALS AND PLASTICS

SERVING INDUSTRY... WHICH SERVES MANKIND

SOAP and Sanitary Chemicals

Volume XXVIII, No. 5 May, 1952

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Editor
FRANK J. REILLY

Business Manager
THOMAS MORGAN

Publisher
MAC NAIR-DORLAND COMPANY

IRA P. MAC NAIR
President

GRANT A. DORLAND
Vice President and Treasurer

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BETTER!

for Synthetic Floor Cleaning Compounds

a nonionic detergent with EXCEPTIONAL CLEANSING POWER

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Faster cleaning action..freedom from film formation..those are two of the reasons why liquid floor cleaners are so rapidly displacing old-fashioned potash scrub soaps. And more and more producers of these newer synthetic floor cleaners are finding NINOL 1281 an ideal base, because of its unique combination of properties.

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Will not creep under or loosen tiling, or leach oils out of flooring materials.

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Please send me Technical Service Bulletin S-101, describing the use of

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as well as other information, and a working sample.

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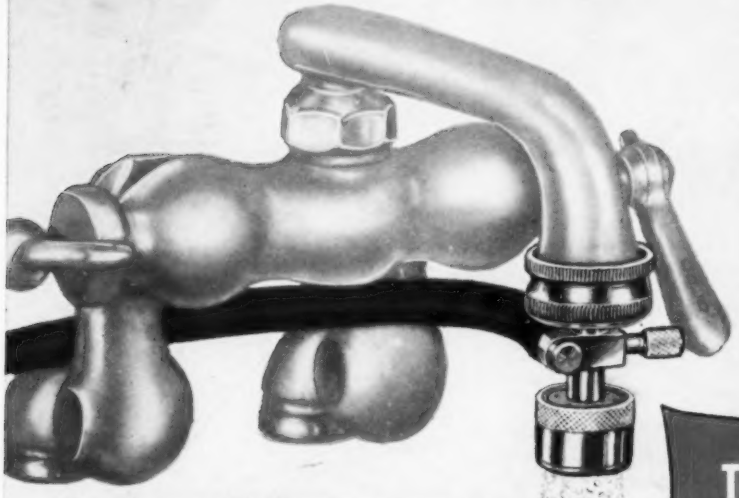

The Most ReMARKable Dishwashing Combination Ever Invented

Here is a revolutionary new way to reduce dishwashing costs as much as 25%—save $$$ on detergents—save time at the sink. Get cleaner Dishes, Glassware, Silverware, Pots and Pans... cleaner than you've ever had before.

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Mark is a liquid detergent that forms oceans of suds instantly—suds that cut grease and food deposits—suds that clean pots and pans without scouring—suds that make dishes and glassware sparkle without scratch, acid or alkali action. Your dishes, glassware and silverware retain their new look longer with Mark.

Mark is easy on the hands; leaves the skin soft and smooth—easy on the pocketbook; half an ounce to 2 gallons of water is all you need—and with the PROPORTIONAIRE you get full cleaning value for every drop used. POSITIVELY No Waste—NO MESS—NO Guessing.

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Proportionaire is a scientific device that proportions the amount of water and MARK Detergent perfectly for best dishwashing results. It may be attached to any faucet, is easy to install and is ready to go to work immediately.

PROPORTIONAIRE churns up volumes of rich, lasting suds, utilizing every drop of MARK; reducing the amount of detergent used by ordinary dishwashing methods as much as one-third. There's no guessing—no spillage—just real economy. MARK makes soap flakes and powdered detergents obsolete.

* PATENT PENDING

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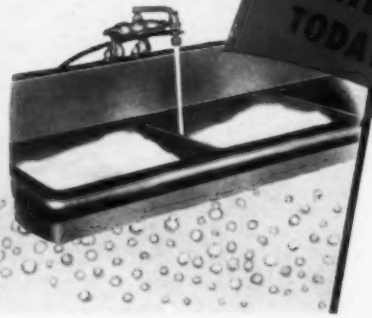

The PROPORTIONAIRE and MARK Detergent combination is sold only through franchised dealers—write today for complete information.

Write, wire or phone for a FREE demonstration.

for soaps and soap building

in cleaning compounds

for soapless detergents

in dishwashing compounds

for water softening

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Blockson has made substantial plant additions in its endeavor to keep up with the increasing demand for its SODIUM TRIPOLYPHOSPHATE, TETRASODIUM PYROPHOSPHATE, TRISODIUM PHOSPHATE and for its SODIUM POLYPHOS which is the Blockson brand name for a water soluble, Glassy Sodium Phosphate with the desirable characteristics of Sodium Hexametaphosphate and Sodium Tetraphosphate.

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- Trisodium Phosphate, Monohydrate
- Disodium Phosphate, Anhydrous
- Disodium Phosphate, Crystalline
- Monosodium Phosphate, Anhydrous
- Monosodium Phosphate, Monohydrate
- Sodium Acid Pyrophosphate
- Sodium Silicofluoride
- Sodium Fluoride
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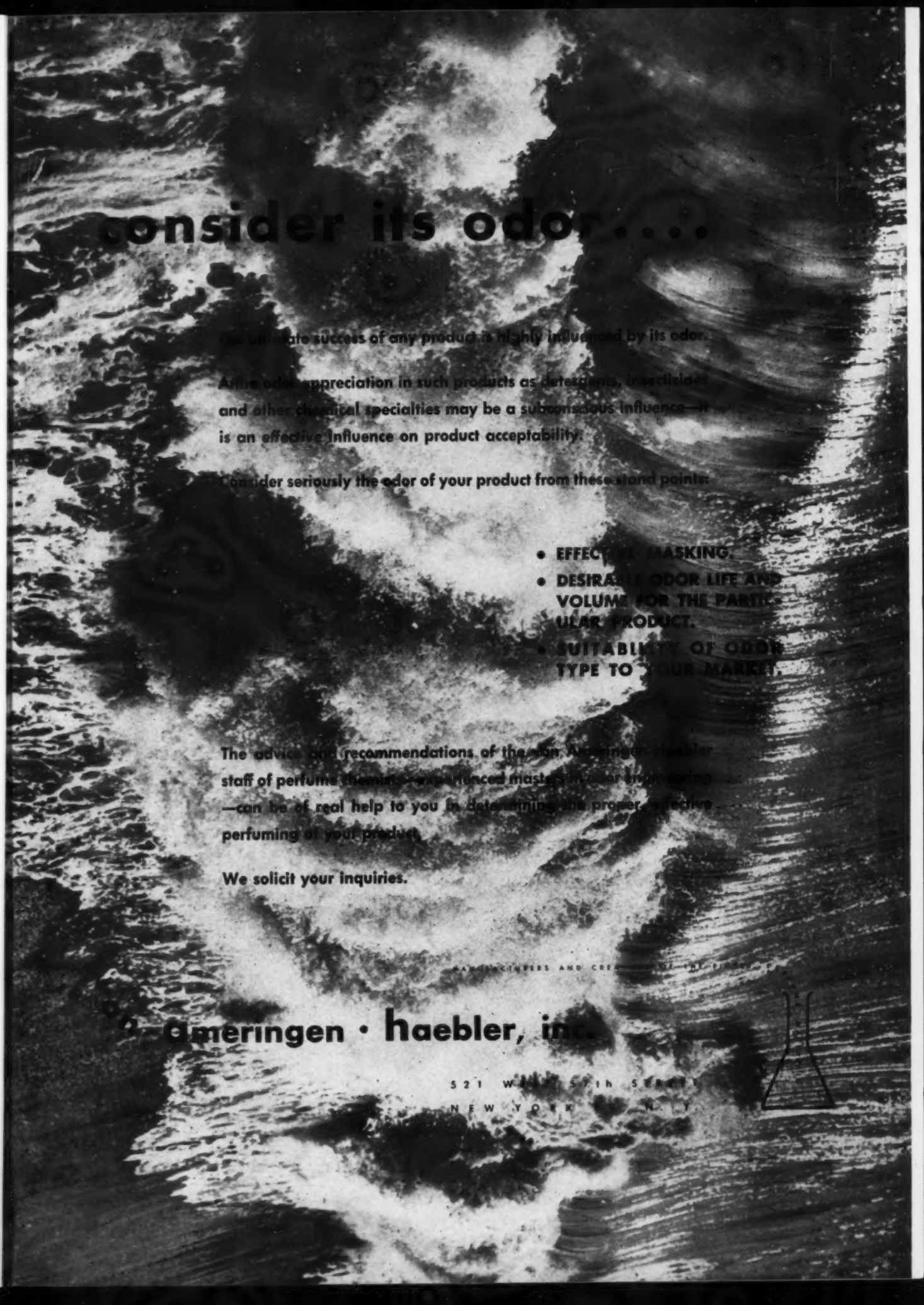
BLOCKSON


consider its odor....
The ultimate success of any product is highly influenced by its odor.
As the odor appreciation in such products as detergents, insecticides and other chemical specialties may be a subconscious influence—it is an effective influence on product acceptability.
Consider seriously the odor of your product from these stand points:
• EFFECTIVE MASKING.
• DESIRABLE ODOR LIFE AND VOLUME FOR THE PARTICULAR PRODUCT.
• SUITABILITY OF ODOR TYPE TO YOUR MARKET.
The advice and recommendations of the Ameringen-Haebler staff of perfume chemists—experienced masters in odor engineering—can be of real help to you in determining the proper, effective perfuming of your product.
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New Pluronic® F68:
First 100%-active flake nonionic ever commercially produced! Significant properties: ease of handling — superior detergency when properly built — stability with quaternary compounds — effectiveness as dispersant for hard-water soap curds.

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Whether your soap process is continuous or batch kettle . . . whether you manufacture detergents or bleaches, Wyandotte has a grade of caustic that will satisfy your needs. Samples and information available upon request.

"We've been in the cleaning compound business for more than 21 years," says Mr. Mertz, owner of L. Carlton Mertz Company, Chicago.

"Today, we make more than 100 products for dairy cleaning, metal fabricating and processing, and general maintenance work.

"To maintain our quality and keep pace with the industry, we make a constant check on all of our sources of supply.

"We find new, improved WYANDOTTE KREELON has good sudsing characteristics and rapid solubility—is very satisfactory for our purposes. We use it in a number of our quality detergents."

Have you tried our improved WYANDOTTE KREELON®? Its characteristics may be helpful to your products, speed your process, or cut your over-all cleaning costs. Send for a FREE sample, and a copy of our new 28-page book. It contains complete data. *Wyandotte Chemicals Corporation, Wyandotte, Michigan. Offices in Principal Cities.*

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They are All Your PROSPECTS for Buckeye "SYND"

the concentrated, neutral synthetic detergent cleaning compound

tap this ACTIVE market...

You'll get a BIG Volume of Business and Steady, profitable Repeat Sales!

Buckeye "SYND"...

works wonders on *ALL* floors, walls, woodwork
. . . develops a clean, fresh odor

Buckeye "SYND" is the latest development from the DAVIES-YOUNG laboratories. It's a powerful liquid detergent that cleans quickly, thoroughly, safely and economically . . . actually dissolves dirt and soil. A trial will AMAZE your customers . . . you'll do them a big favor when you demonstrate and sell "SYND" for all cleaning jobs!

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Learn all about "SYND"—see how easy it is to sell—and then watch how fast and *regularly* the steady repeat orders come rolling in. "SYND" is a natural profit-maker because it so *completely* fills every cleaning need.

send the coupon in at once—
try "SYND"—prove it for yourself!

D.Y
QUALITY
SINCE 1844

The **DAVIES-YOUNG** Soap Co.
Dayton 1, Ohio

Clip Coupon . . . Mail at Once

FREE OFFER

SSC 5-52

THE DAVIES-YOUNG SOAP COMPANY
BOX 995, DAYTON 1, OHIO

Yes! We are interested in the sales and profit-possibilities of "SYND." Rush samples and literature today.

Firm Name_____

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City_____ Zone____ State_____

A GUIDE

TO WAX PRODUCTS PURCHASING FOR PRIVATE BRAND RESALE

An honest appraisal of floor wax products as we see it is offered to guide wax buyers who want the best quality money can buy...

SELF POLISHING WAXES

Candy's Supreme (standard)
Candy's DeLuxe
Bright Beauty (standard)
Candy's No. 640
Candy's Supreme Special WR
CAND-DOX #CS
CAND-DOX #BB

Seven floor waxes that *are* all-around top quality for any given traffic condition. Each imparts the finest protection and beauty to floors for which they are best suited.

Bright Beauty FLOOR CLEANER

An outstanding material for removing even the heaviest wax film and dirt.... Brings neglected floors "back to normal." The *right* cleaning agent to insure the most efficient floor maintenance.

Bright Beauty CREAM FURNITURE POLISH

A cream furniture polish that spreads easily, polishes without excessive effort and imparts a deep impressive lustre. Too, it permits *repeated repolishing* with a dry cloth saving reapplication time and again; truly a very economical polish of very highest quality.

Bright Beauty PASTE WAX

A paste wax that is properly blended and refined from excellent quality solids and solvents that produce the best drying time and thorough evaporation. A wax that is easy to handle, having "creamy" consistency and stability throughout its stocking and usage period.

Bright Beauty LIQUID (spirit) PREPARED WAXES

Complete line of spirit dissolved waxes that meet a wide variety of demands for durability, color and types of usages. Each its own "Dry Cleaner," they keep a surface waxed with a superb protective coating necessary to many difficult surfaces such as certain floors (where adaptable), bars, wallpaper, etc.

Bright Beauty GLASS POLISH & CLEANER and SILVER POLISH

As a Glass Cleaner (pink color) it applies evenly with little effort, wipes off easily with negligible "powdering" and produces an undeniable "feel" of cleanness to glass that is actually true in fact. Different in color only as Silver polish, it imparts a highly desirable lustre to all silver *without* abrasion and can even correct the abuses of scratchy, "quick-polish" inferior products.

Bright Beauty DANCE FLOOR WAX

Basic advantages are freedom from "balling up," thus does not gather dirt and impregnate the floor with hard spots difficult to remove...also is free from dusty effects. Adds the protective quality to expensive ballroom floors that means more "floor-years" to users everywhere.

Bright Beauty Heavy Duty PASTE CLEANER

Really *cleans* and *scours* more effectively and quicker than most scouring powders. Depending on application, it can clean to perfection even painted walls to provide a suitable repainting surface. 100% active, free from excessive abrasive quality, it frees almost every surface from all forms of foreign matter to perfection.

1. BEAUTY AND DURABILITY

should be considered together. Initial appearance is important, but for a waxed surface to remain beautiful it must be durable. Durability depends not only on resistance to the abrasion of traffic but even more so on resistance to the collection of dirt and to discoloring traffic marks. Durability is really measured by how long the waxed surface maintains a nice appearance before the necessity of complete removal and re-waxing.

2. ANTI SLIP

qualities are necessary in a good wax as a matter of safety underfoot. This important quality does not necessarily require the sacrifice of beauty and protection which are the foremost original reasons for the use of a wax. Look for the proper balance—a wax film which is not excessively slippery yet which is not tacky and does not excessively collect dirt.

3. WATER RESISTANCE

is important, particularly when considering the possibility of wet traffic and the necessity for frequent damp mopping for the purpose of removing surface dirt. Overdoing this quality means greater difficulty in applying multiple coats of wax and may seriously increase the difficulty in removal when complete cleaning and re-waxing is necessary. Water resistance is important, but so is the quality of removability.

4. SOLID CONTENT

when expressed in percentage is not nearly as important as the *quality* of the solid content. When considering good quality, 12% of solids answers most needs for good planned maintenance programs. Two applications of 12% will give better results than one of 18%. However the more concentrated material is useful for some programs of maintenance and particularly on "washed-out" floors, etc. Over-waxing should be avoided so that periodic complete removal will not be too difficult.

5. CARNAUBA WAX

is still the most important basic ingredient in our floor waxes. When refined and compounded with other important ingredients and "KNOW HOW," it aids materially in producing the most important features of a good floor wax...ALL AROUND QUALITY OF PERFORMANCE.

● ALL AVAILABLE FOR PRIVATE BRAND ONLY
We do not compete with our jobbers for consumer sales.
We sell only to distributors, except for experimental accounts in Chicago essential to research.

Wax Specialists for over 60 years

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ULTRAWET Detergents Mean Quality

In the Dairy Industry
cleanliness is the ideal
and cost the problem

ULTRAWETS
answer both

Atlantic synthetic detergents meet your customers' highest cleanliness standards and tightest budgets. From the milking machine to the milk bottle, there is an ULTRAWET made to satisfy each of your customers' demands. For instance, if you market:

ALKALINE CLEANERS The addition of an ULTRAWET to the alkalis and complex phosphates speeds penetration, enhances detergency, and improves rinsability. Shall it be ULTRAWET SK bead or K flake—each of which is available in two densities? The choice of *which* ULTRAWET is determined by such things as type of mixer used, desired finished product density, and product appearance.

ACID CLEANERS Whether you use phosphoric, hydroxyacetic, gluconic, lactic or citric acid in your milkstone remover—be sure to include ULTRAWET 30 DS in your formulated cleaner. The ULTRAWET 30 DS—or ULTRAWET DS if you prefer a flake instead of the liquid—shows the greatest compatibility with these acids, and speeds up penetration. That means a faster, better job done at a lower cost to you.

We'll be glad to discuss the ULTRAWETS with you and make specific recommendations as to which one will best fit your needs. Write The Atlantic Refining Company, Chemical Products Section, Dept. D-10, 260 So. Broad Street, Philadelphia 1, Pa.

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ULTRA

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Sulframin* Built Beads—in spray dried form—are setting a new high standard for detergents in the restaurant, institutional and laundry fields. They're based on 30% Dodecyl Benzine Sulfonate. Fortified with complex phosphates. Balanced with the proper amount of CMC. Blended with a great white dyestuff.

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You, like many others, may discover new savings, new profits with these

ULTRA PRODUCTS

ULTRA

ALKYL ARYL SULFONATES

For excellent wetting, good detergency, and fine foam stability, specify Ultra Alkyl Aryl Sulfonates.

SULFRAMIN* AB-40 FLAKES or POWDER
SULFRAMIN* AB—CONCENTRATE FLAKES or POWDER
SULFRAMIN* E LIQUID
SULFRAMIN* KE LIQUID
SULFRAMIN* SULFONIC ACID
SULFRAMIN* AB SLURRY

One or a combination of these alkyl aryl sulfonates may do a superior job for you. Or a special formulation can be developed to exactly meet your needs.

Let us help solve your detergent problems without obligation.

ULTRA

BULK WAXES FOR YOUR PRIVATE LABEL

Many of the nation's largest distributors of world-famous private brand waxes have depended on Ultra as a supply source for more than 15 years. Their experiences prove that Ultra waxes sell better and repeat better, because Ultra waxes are longer wearing, take tougher punishment, are more brilliantly lustrous. *They're self-leveling, self-polishing, non-streaking.*

Ask for samples, specifications, and current price schedule.

Write for details!

ULTRA Chemical WORKS

ULTRA CHEMICAL WORKS, INC.

Hawthorne, Calif. PATERSON, N. J. Joliet, Ill.

THE FLOOR THAT WOULDN'T STAY WAXED!

This was the situation that faced one of Jobber A's good customers, and put Jobber A on the receiving end of a constant stream of complaints and threats to "take his business elsewhere."

THIS IS HOW THE PROBLEM WAS SOLVED

Fearing that this account would be lost, Jobber A came to Oil Specialties for help. Our Field Service man, as a representative of Jobber A, arranged for an appointment with the unhappy customer to check cleaning methods and materials, floor surface and traffic, waxing materials and methods.

His field survey showed that Jobber A had been selling his customer a wax formulated for frequent application, which would not last under heavy traffic conditions. He reported back to Jobber A, recommending that he switch his customer to our Saf-T-Wax,® especially designed for long wear and less frequent application.

Once again, Oil Specialties, acting for a jobber as part of his organization, proved how specialized assistance can regain a customer's confidence . . . and save hundreds of dollars in lost sales.

For further information about our products and services, write us today. Our FREE, informative booklet "FLOOR WAXES — USES AND APPLICATIONS" is yours on request.

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Photomicrographs prove what you instantly sense . . . when you examine NACCONOL DB and pour it from one container to another . . . these beads are remarkably uniform, amazingly free-flowing and *strong*.

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send for technical bulletin

Our Technical Bulletin #316 gives complete data on the physical strength of Nacconol DB in terms of mechanical mixing operations. Get your copy from our nearest office.

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"Now, whites really come out white with CMC-CT laundry size . . . and in less time"

EASIER TO IRON WITH !

"Wash doesn't stick to the press anymore with this CMC-CT size . . . and I can handle more work"

EASIER TO SELL WITH !

"My white shirts now feel and look like new . . . no more knife-like edges on my collars and cuffs"

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Cellulose Products Department
961 Market Street, Wilmington, Delaware

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CMC-CT

CM52-1

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"Looking for HONEST VALUE in soap-making acids?"

You'll get more for your money in . . .

ADM Vegetable fatty acids

COCONUT—LINSEED—SOYA—CORN—CORN-SOYA
COTTONSEED and MIXED VEGETABLE TYPES

A complete line for quality soaps at all price levels

The truly smart and successful buyer—and especially the buyer of chemicals—knows that there are many elements in a "bargain." Most important, we believe, is the assurance of *getting what you order*.

As we all know, this is a special problem in buying fatty acids for soap-making. For even slight variations in raw materials and processing can impair the purity of acids—and their uniformity—and their titre, color and saponification characteristics.

If you are now a buyer of ADM fatty acids, you are well aware that high quality is *unvarying* in these products. The reasons include such factors as our unmatched plant facilities, production control, and others. The results include superb clarity in liquid soaps . . . purity in the highest degree . . . and a minimum content of unsaponifiables.

Should you ever take a chance on anything less than this—at any price? Check the ADM line, and let us send you samples and technical data.

Take the Scientific Shortcut
with **Archer fatty acids**

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4

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___Send Technical Bulletin.

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COMPANY_____
ADDRESS_____
CITY_____ ZONE___ STATE_____

An Aromatic of Growing Interest

C·64

. . . TO WEAVE RICH PATTERNS IN FRAGRANCE !

Since its introduction as an aromatic chemical, C·64® has successfully captured and held the attention of an increasing number of manufacturers of toilet soaps, sanitary and kindred products. In part, C·64 owes its success to its ability to mask unpleasant inherent odors that tend to create sales resistance in some soap products.

C·64 is a powerful crystalline aromatic suggesting the active odor character of Patchouli. It is long lasting and its odor associates itself easily with other aromatics as well as essential oils.

Write us for a working sample and suggestions for its use for your particular problem.

BUSH AROMATICS

DIVISION OF THE DOW CHEMICAL COMPANY • 629 GROVE STREET • JERSEY CITY 2, N. J.

DOW CHEMICAL OF CANADA, LIMITED, TORONTO, CANADA

EXCLUSIVE SALES REPRESENTATIVE FOR SYNAROME IN THE UNITED STATES, CANADA AND CUBA.

DOW

ONE JUMP AHEAD

Research to explore the potentialities of its present products and to develop allied products . . . this is the secret of Niagara's position among the leading suppliers of quality chemicals for soap-making and for sanitary chemicals.

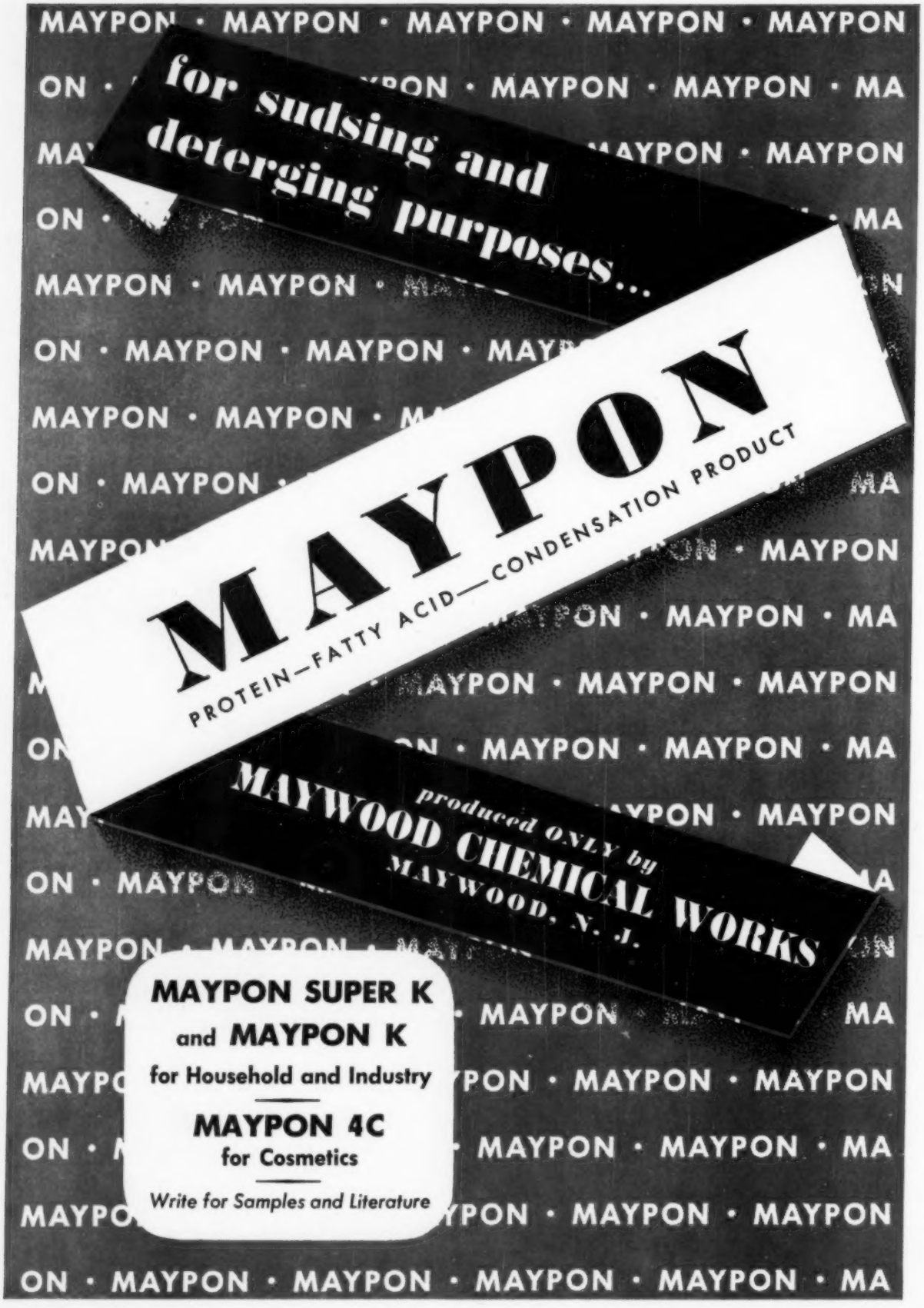
NIALK®

Caustic Soda
Caustic Potash
Carbonate of Potash
Paradichlorobenzene

NIAGARA ALKALI COMPANY

60 East 42nd Street, New York 17, N. Y.

Liquid Chlorine • Caustic Potash • Carbonate of Potash • Paradichlorcbenzene • Caustic Soda • TRICHLORethylene
NIAGATHAL® (Tetrachloro Phthalic Anhydride)


for sudsing and
deterging purposes...
MAYPON
PROTEIN—FATTY ACID—CONDENSATION PRODUCT
produced ONLY by
MAYWOOD CHEMICAL WORKS
MAYWOOD, N. J.
MAYPON SUPER K
and MAYPON K
for Household and Industry
MAYPON 4C
for Cosmetics
Write for Samples and Literature

Faithfully recrea[illegible] fragrance of
the living flower—a substitute for the Absolute at a savings
Rosan
ROSE DE MA[illegible]YNTHETIC
by Alb[illegible] Company, Inc.

Albert Verley & Company's

Rosam

. . . a worthy substitute for the costly natural Absolute

Rosam is a remarkable achievement in synthesis. It has won a permanent place for itself in all forms of perfumery as a complete substitute for Absolute Rose de Mai. You can use it in your most significant formulas — alone or in combination with the natural product, without excessive cost burden — and with confidence that results are a credit to your perfumes and your prestige. Its price is just $25.00 a pound — especially noteworthy now, in view of the continuing high cost of Rose Absolutes, particularly Bulgarian Otto of Rose.

We suggest that you experiment with Rosam. Appraise its possibilities in your present compounds, or the new one you are now creating. Write today for working sample.

ALBERT VERLEY AND CO., INC.
466-472 W. Superior St., Chicago 10, Ill.
114-116 E. 25th St., New York 10, N. Y.

MEFFORD CHEMICAL CO.
1026 Santa Fe Ave., Los Angeles 21, Calif.

ALBERT VERLEY AND CO., INC.
222 Front St., East, Toronto, Ontario

Representatives in all principal cities throughout the world.

Where Your Dollars Have More Scents

Albert Verley

AND COMPANY, Inc.

Headquarters for Odor Appeal

Synthetic Aromatic Products and Organic Isolates • Synthetic Flower Oils and Aromatic Bases • Bouquets and Finished Compositions.

NYTRON

TRADE-MARK REG. U. S. PAT. OFF.

improves the performance of

- ✓ Phosphates
- ✓ Silicates
- ✓ Caustic and other Sodas
- ✓ Soaps
- ✓ Acids

NYTRON will improve the performance of most processes using solutions of phosphates, silicates, acids, soaps, caustic soda, soda ash and similar materials. In industries as varied as textile manufacturing and steel pickling, laundering and dairy cleaning, NYTRON has found such unique applications because *no other wetting agent-detergent matches* NYTRON'S *combination of properties!*

Examine this unusual combination of properties! When used in combination with other materials—or used alone—NYTRON provides faster wetting . . . better penetration . . . more thorough rinsing . . . improved detergency! Find out how NYTRON can help you get improved performance too!

Detergency

It is effective on an unusually wide variety of soils. NYTRON has excellent power to remove oil and grease from fabrics, surfaces, metal parts. It cleans efficiently in cold, as well as warm or hot water and retains its detergent action when used in either acid or alkaline mediums.

Hard Water Action

NYTRON is more economical because increased quantities do not have to be added to compensate for water hardness; completely prevents the formation of scum, grease rings, streaks, spots.

Chemical Stability

Remains chemically stable over a wide range of temperatures, acidity or alkalinity.

Rapid Solubility

NYTRON goes into solution almost instantly in hot or cold water and will not "salt out" in concentrated solutions of many acids, alkalies or metallic salts.

Quick, Thorough Rinsing

NYTRON rinses promptly and completely in cool or even cold water, does not leave an insoluble deposit.

Reduced Wetting Time

Effectively lowers surface tension, even in extremely low concentrations. It improves the action of acid and alkaline solutions over a wide range of temperatures.

Foaming

NYTRON will foam in any normal concentration of acid or alkali, in distilled water or sea water, in ice cold or boiling water.

Improves Performance of Soap

Improves quality when used to partially or completely replace soap.

Mail Coupon for FREE Sample!

A SOLVAY PRODUCT

SOLVAY SALES DIVISION, Allied Chemical & Dye Corporation, 40 Rector Street, New York 6, N. Y.
I want to see for myself how NYTRON improves performance. Please send me a free sample plus non-technical information and specific technical data on this Synthetic Organic Detergent with the exclusive combination of properties.

Name_____

Title_____

Company_____

Address_____

City_____ Zone_____ State_____ SSC-5

Producers of foods, condiments, drugs and toiletries, detergent mixtures, insecticides, molding powders, heavy and fine hygroscopic chemicals, etc., etc.

Keep 'em Flowing

WITH

Magnesol*

THE *EFFECTIVE* FLOW-PROMOTER AND ANTI-CAKING AGENT

If your powdered, flake, or granular material now picks up moisture, cakes or agglomerates during shipping, storage, processing or use, MAGNESOL BRAND magnesium silicate may be just the flow promoter and anti-caking agent you need.

MAGNESOL is an adsorptive, synthetic magnesium silicate with a combination of unique physical and chemical properties that have produced unexpectedly good results in many diverse applications.

Its finely-divided structure forms an intimate, "slippy" coating on the protected powdered material. Its prolonged mildly desiccant activity lengthens the "shelf life" of packaged goods and prevents agglomeration of bag and bulk products.

Being a synthetic inorganic made under close chemical control, MAGNESOL has dependably uniform properties. High effectiveness in small quantities and modest price make the cost of using MAGNESOL nominal.

Successful large scale commercial applications indicate that it can be worth-while for you to explore the possibilities of MAGNESOL open-mindedly. We invite you to act upon the offer on the right.

SEND FOR TECHNICAL DATA AND TEST SAMPLE

Kindly describe your problem to our Technical Service Division and obtain maximum benefit from our experience.

WESTVACO CHEMICAL DIVISION
FOOD MACHINERY AND CHEMICAL CORPORATION
161 EAST 42nd STREET, NEW YORK 17, N. Y.

CHICAGO, ILL. • CLEVELAND, OHIO • CINCINNATI, OHIO • CHARLOTTE, N. C.
ST. LOUIS, MO. • POCATELLO, IDAHO • LOS ANGELES, CALIF. • NEWARK, CALIF.

**MAGNESOL is the registered trade mark of Food Machinery and Chemical Corporation for its brand of magnesium silicate adsorptive powder.*

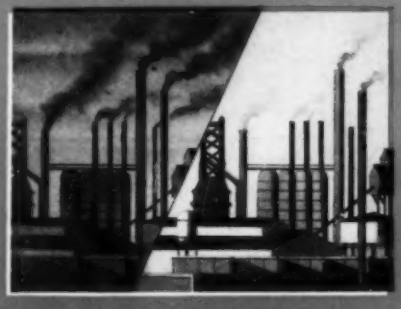
ORONITE CHEMICAL COMPANY

D-40

offers great versatility in processing and product formulation to a wide variety of industries

D-40 is helpful in many textile operations such as wool scouring.

D-40 is an excellent base for dairy equipment cleaning compounds.

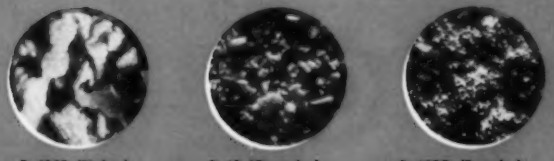


D-40 can help relieve smog conditions.

The fields of application for this exceptional detergent are almost limitless because of the versatility and effectiveness of D-40 in cleaning, wetting, emulsifying, emulsion prevention, dispersing and foaming. Whether you are preparing specialty compounds or repackaging, you will find D-40 has a high degree of chemical stability, is rigidly uniform in all its properties, including color and odor.

The reputation of D-40 is backed by Oronite—the world's largest producer of synthetic detergent raw materials. Write or telephone the Oronite office nearest you for information, literature and test data.

Particle sizes of D-40 enlarged 5 times



D-40SF (Flakes) D-40 (Granules) D-40FG (Powder)

Flakes, granules, powder—all offer a wide range of application. Ask us to show you which products can best fit your requirements.

NEW DETERGENT BOOKLET!

"DETERGENTS"—a 24-page booklet just published is available free of charge. Factual and easy to read, it shows and describes scores of up-to-the-minute industrial uses and applications of detergents. Many such applications provide process improvements; others represent means of product improvement or product cost reduction. Write any Oronite office for your copy.

ORONITE CHEMICAL COMPANY

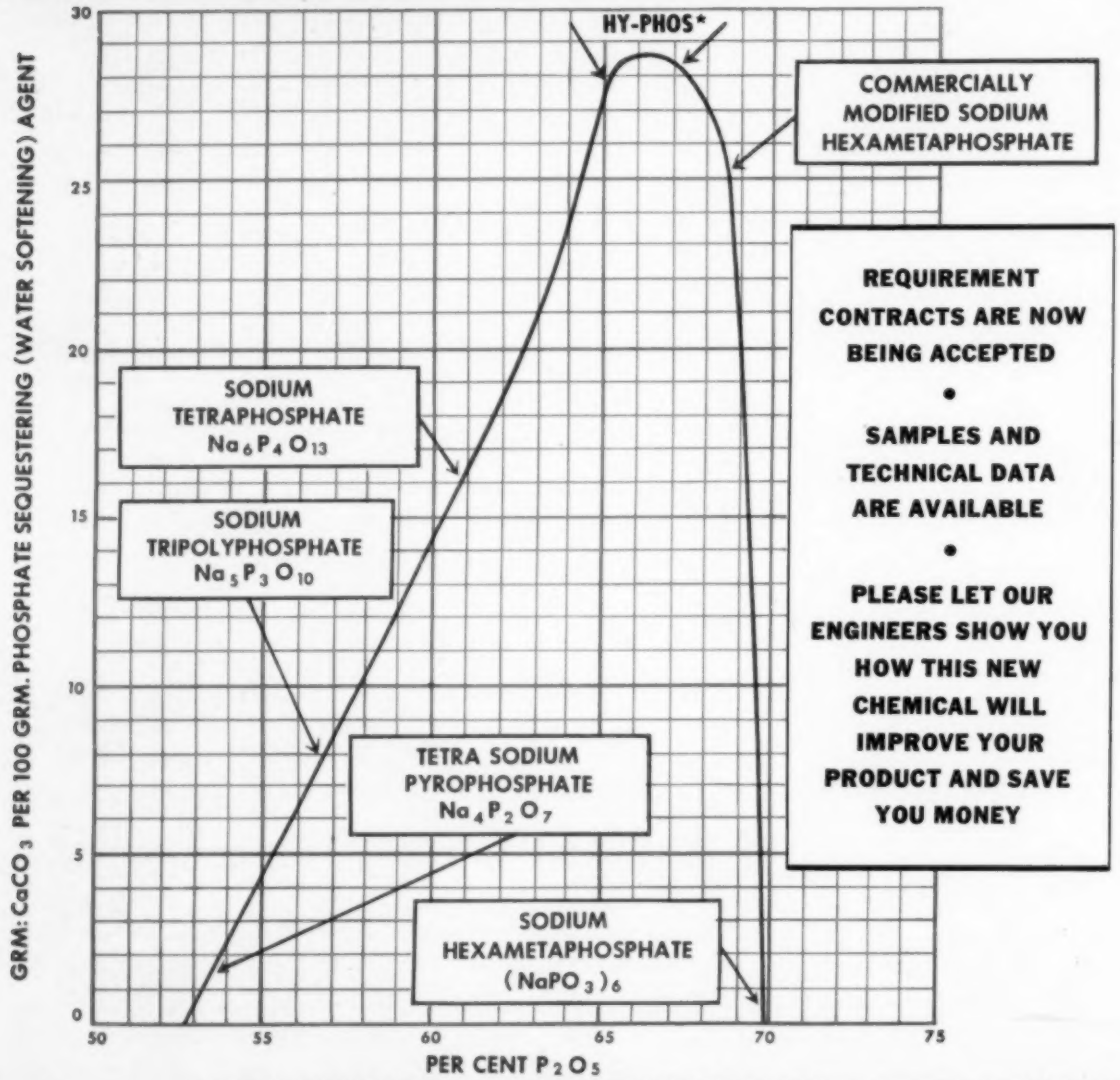
38 SANSOME ST., SAN FRANCISCO 4, CALIF. STANDARD OIL BLDG., LOS ANGELES 15, CALIF.
30 ROCKEFELLER PLAZA, NEW YORK 20, N.Y. 600 S. MICHIGAN AVENUE, CHICAGO 5, ILL.
MERCANTILE SECURITIES BLDG., DALLAS 1, TEXAS

HY-PHOS*

THE AMAZING NEW SODIUM GLASSY PHOSPHATE

FOR-

- SOAPS AND DETERGENTS
- TREATING DRILLING MUDS
- DISH WASHING
- TEXTILE PROCESSING
- WATER TREATMENTS
- CLEANING COMPOUNDS
- BOILER WATER COMPOUNDS
- METAL CLEANERS
- MAKING SOAP POWDERS
- ETC.



REQUIREMENT CONTRACTS ARE NOW BEING ACCEPTED

•

SAMPLES AND TECHNICAL DATA ARE AVAILABLE

•

PLEASE LET OUR ENGINEERS SHOW YOU HOW THIS NEW CHEMICAL WILL IMPROVE YOUR PRODUCT AND SAVE YOU MONEY

CALCIUM SEQUESTERING (WATER SOFTENING) PROPERTIES OF COMPLEX PHOSPHATES USING SOAP AS AN INDICATOR

U. S. PATENT NO. 2,574,047 GRANTED NOV. 6, 1951

AMERICAN DYEWOOD COMPANY,

RIVERSIDE MILLS, CHESTER, PA.

* Trade-Mark

FLOOR SAFETY ASSURED WITH "SURE STEP WAX"

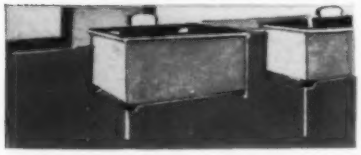
. . . BECAUSE IT CONTAINS* LUDOX

Rich – glossy looking yet **SAFE!**

Sure Step Wax is the tried and proven safety floor wax. It has been the pioneer . . . the leader. Thousands of hospitals, schools, industrial plants, office buildings and many other Sure Step Wax users, who demand floor safety are using Sure Step Wax throughout their floor maintenance program.

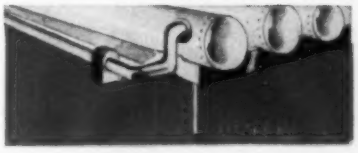
Contains *LUDOX colloidal silica. The addition of this special ingredient, developed by the Du Pont Corp. together with the proper base wax developed by Washburn gives Sure Step Wax its safety feature, with increase of gloss.

Rugged Beauty For Home—Stores—Office—Plants, Etc.



Sure Step Wax adds new beauty and color to your office floors.

Sure Step Wax gives new life and sparkling lustre to institutional floors.



Sure Step Wax has the rugged toughness and safety required in industrial plants.

Sure Step Wax—Solves An Old Problem

Sure Step Wax outmodes all ordinary anti-slip floor waxes, with their dull, gummy and tacky surfaces. Sure Step Wax has been discovered to definitely do a better job because it combines safety plus long-lasting, wearing qualities. Requires only 20 minutes to dry to a mirror-like finish. Sure Step Wax will last longer, costs less to clean and maintain.

In 15, 30, 55 gal. drums; 5 gal. cans.

LISTED UNDER UNDERWRITERS' LABORATORIES, INC. REEXAMINATION SERVICE UL OF

WRITE FOR SAMPLES, specifications and prices.

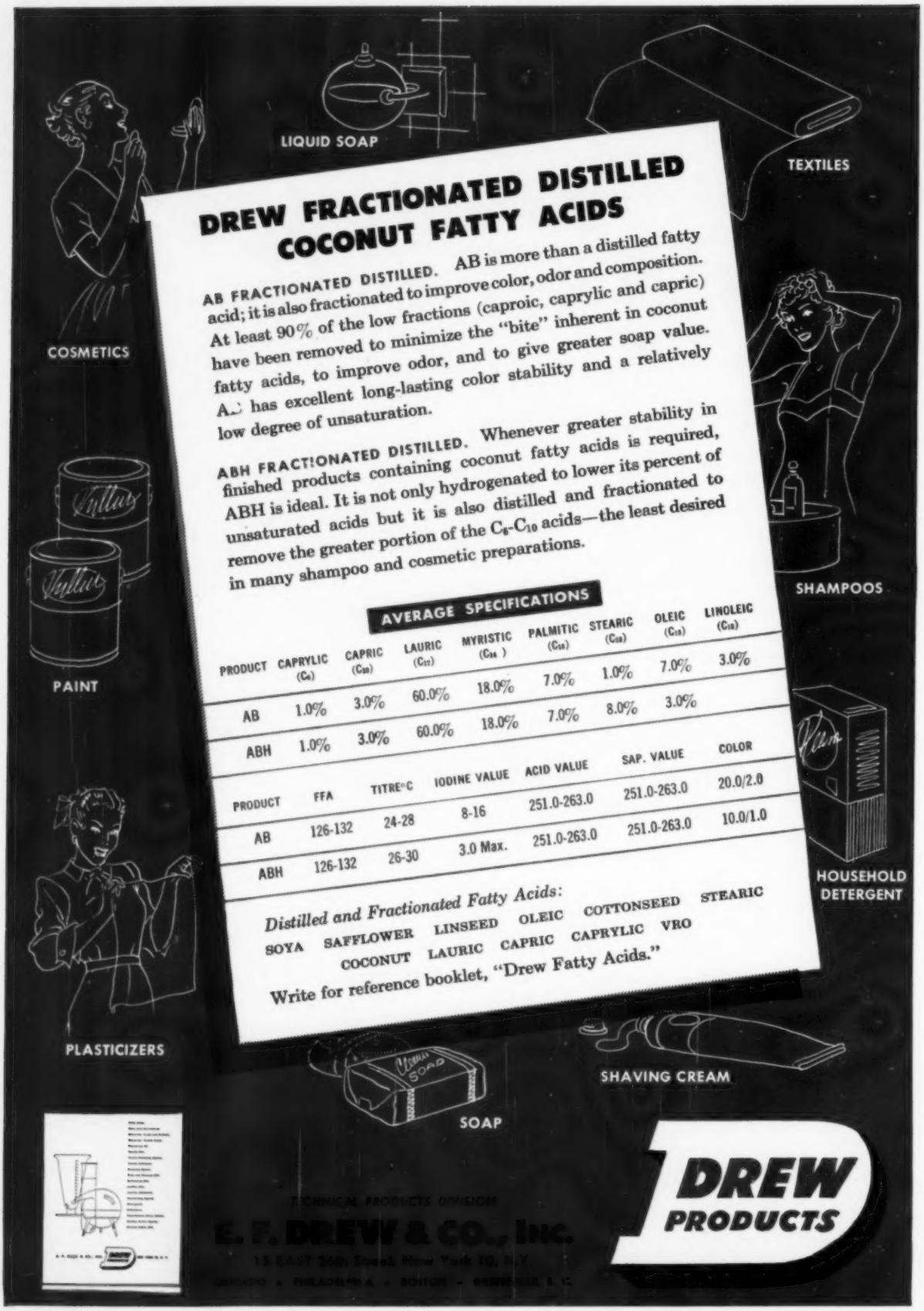
* Trade Mark of E. I. DU PONT de Nemours & Co., Inc. Reg. U. S. Pat. Off.

REGIONAL WAREHOUSING SAVES SHIPPING COSTS

LOS ANGELES · SAN FRANCISCO · DENVER · SEATTLE · ATLANTA · DALLAS

T. F. WASHBURN COMPANY

2244 Elston Avenue Chicago 14, Illinois BRunswick 8-6760



DREW FRACTIONATED DISTILLED COCONUT FATTY ACIDS

AB FRACTIONATED DISTILLED. AB is more than a distilled fatty acid; it is also fractionated to improve color, odor and composition. At least 90% of the low fractions (caproic, caprylic and capric) have been removed to minimize the "bite" inherent in coconut fatty acids, to improve odor, and to give greater soap value. AB has excellent long-lasting color stability and a relatively low degree of unsaturation.

ABH FRACTIONATED DISTILLED. Whenever greater stability in finished products containing coconut fatty acids is required, ABH is ideal. It is not only hydrogenated to lower its percent of unsaturated acids but it is also distilled and fractionated to remove the greater portion of the C_8-C_{10} acids—the least desired in many shampoo and cosmetic preparations.

AVERAGE SPECIFICATIONS

PRODUCT	CAPRYLIC (C_8)	CAPRIC (C_{10})	LAURIC (C_{12})	MYRISTIC (C_{14})	PALMITIC (C_{16})	STEARIC (C_{18})	OLEIC (C_{18})	LINOLEIC (C_{18})
AB	1.0%	3.0%	60.0%	18.0%	7.0%	1.0%	7.0%	3.0%
ABH	1.0%	3.0%	60.0%	18.0%	7.0%	8.0%	3.0%	

PRODUCT	FFA	TITRE°C	IODINE VALUE	ACID VALUE	SAP. VALUE	COLOR
AB	126-132	24-28	8-16	251.0-263.0	251.0-263.0	20.0/2.0
ABH	126-132	26-30	3.0 Max.	251.0-263.0	251.0-263.0	10.0/1.0

Distilled and Fractionated Fatty Acids:
SOYA SAFFLOWER LINSEED OLEIC COTTONSEED STEARIC
COCONUT LAURIC CAPRIC CAPRYLIC VRO

Write for reference booklet, "Drew Fatty Acids."

TECHNICAL PRODUCTS DIVISION
E. F. DREW & CO., INC.
15 EAST 26th Street, New York 10, N.Y.
CHICAGO • PHILADELPHIA • BOSTON • CLEVELAND

DREW PRODUCTS

Newest *non-ionic* detergent offered by Rohm & Haas for formulation in metal cleaners has two important requirements for efficient metal cleaning:

a. A cloud point in the 185°-190°F range is right in line with high cleaning tank temperatures.

b. Detergent activity, like that of TRITON X-100, is outstanding for the following metals:

Aluminum	*Steels:*
Brass	*bonderized*
Copper	*furniture*
Iron	*passivated*
Zinc	*stainless*

Write for samples and detailed information. This material has been previously offered as Experimental Detergent 9X-102.

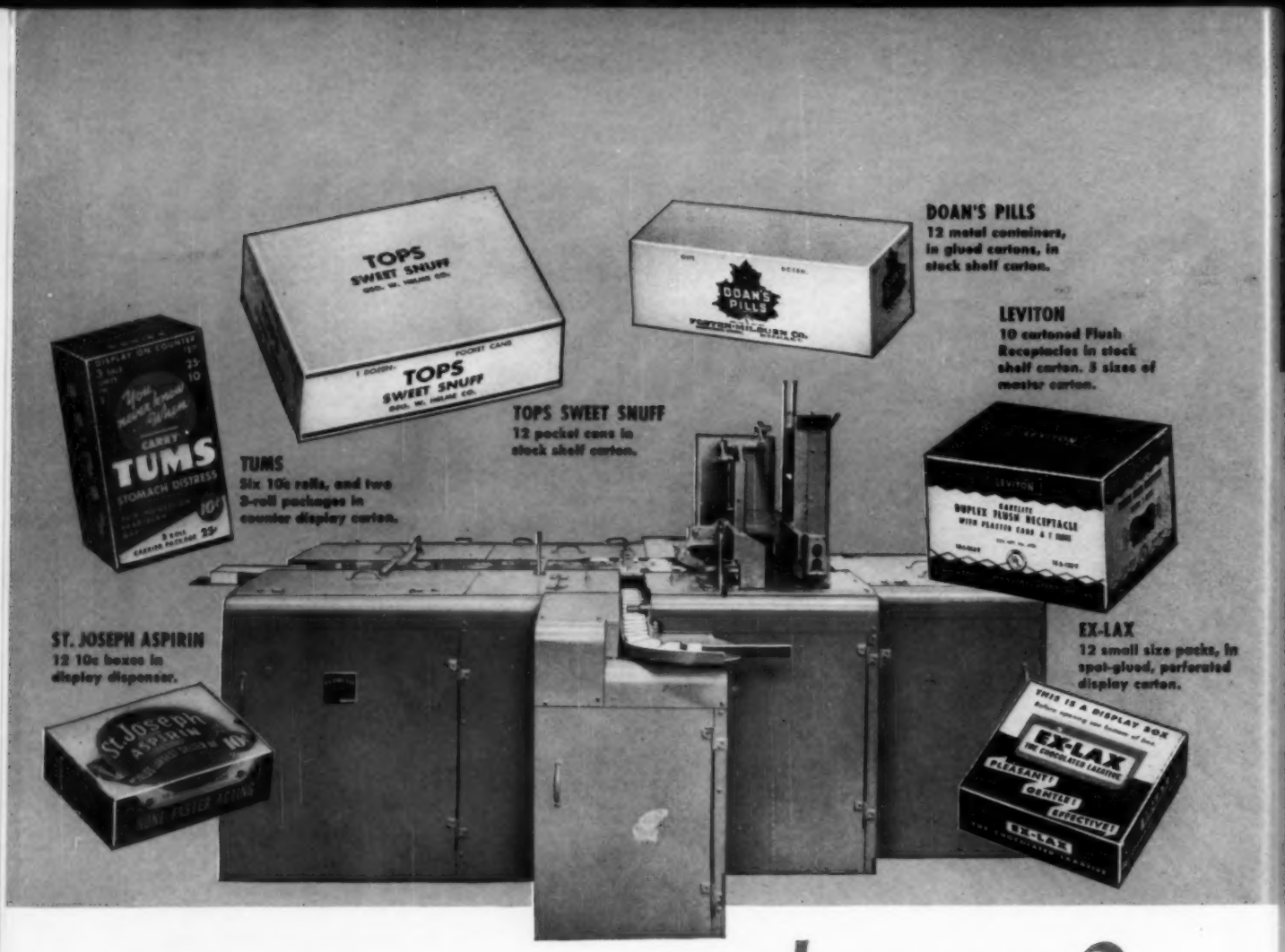
TRITON *is a trade-mark, Reg. U.S. Pat. Off. and in principal foreign countries.*

CHEMICALS FOR INDUSTRY

ROHM & HAAS COMPANY

WASHINGTON SQUARE, PHILADELPHIA 5, PA.

Representatives in principal foreign countries



DO YOU PACK IN *dozens?*

As the production rate of packaging lines has increased, more and more operators are needed to get the product into the master carton for shelf storage or display. This costly operation is completely mechanized by the Jones Accumulator Cartoner. The flexibility of the basic machine permits its adaptation to wide variations in size, quantity, and arrangement of loads. It offers users money-saving and money-making advantages:

Receives individual containers automatically from preceding machine.

Stacks in prescribed arrangement — automatically insures correct count.

Feeds, opens and loads master carton—closes end flaps by tucking or gluing.

Prints control or catalog numbers, color, flavor or other variable information, simplifying carton inventory.

Produces rigid, tamperproof, sealed containers, difficult to obtain by hand packing.

For display cartons, a skip-glued longitudinal seam insures easy opening and proper set-up, without mutilating carton.

Fully automatic, the Accumulator Cartoner usually requires only part-time attention. Seventy-five percent or more of operator's time available for packing master cartons into shipping containers.

High operator efficiency justifies Accumulator Cartoner for output of only one line.

Speeds of 5 to 100 master cartons per minute enable one cartoner to handle output of two or more lines where needed, eliminating from 2 to 15 operators.

R. A. JONES & COMPANY, INC.

Cartoning Machines — Soap Presses

Ask us for detailed information, or submit your problems to Jones' experienced cartoning engineers for prompt diagnosis.

P. O. BOX 485, CINCINNATI, OHIO

. . . in brief

as the reader sees it . . .

STOP HIS TEARS . . . One solution of wholesale misuse of coupons is to make the coupon a part of an actual package. When the carton of soap or detergent is empty, the housewife cuts out the coupon and then presents it to the grocer as part payment on some other product or possibly for the same product. Although this system has been used for years, we note that two leading soapers recently have gone back to it. To push the sale of another product of the same manufacturer, the plan may have merit. But, when used to induce the housewife to buy another package of the same stuff, it is simply one more price cut. Why not buy a little friendship with the grocer with the money instead? Let him make the profit and help stop his flood of tears of self pity. Soapers could use more of his friendship and less of his animosity.

HAND SOAP VACUUM . . . Three smaller soapers told us recently that were it not for federal and state business, their plants would be running on an average of less than two days per week right now. Another well-known maker of a nationally distributed mechanic hand soap described present demand for his products as the nearest thing to a vacuum he has yet noted and equally as bad as the darkest days of the depression. Several jobbers of cleaning and maintenance products confided to us that a sizable order from a buyer with good credit is the sure sign for a free-for-all price slashing melee. And, they added, they are putting the bee in turn on the manufacturer for price reductions.

Frankly, we do not believe that the *consumption* of soaps, cleaners, waxes, et al, has dropped off to anything like the extent which has been pictured. That actual use is down some, we do not deny, but not to the degree indicated. Consumers are still working off those stocks in the storeroom, be it factory, institution or household. Pretty soon, they should be cleaned out and must be replaced. But, with no fear at the moment of higher prices, few buyers feel the need to cover. Money, obviously, is not as free as it was and they would rather have it in the bank.

FLOOR WAX SPEC . . . First meeting between representatives of the General Services Administration and floor wax manufacturers to pave the way for writing a new, suitable government specification for emulsion floor wax was held late last month. From this will come a joint GSA-industry committee to get the actual work started. The problem has many ramifications and will be no easy task. A performance specification? A formula specification? One master specification or three or four different ones?

GSA took the first important step in closing down its wax plant. From now on, we feel that complete industry cooperation is assured and that suitable specifications will be worked out jointly in spite of numerous obstacles and divergent views. With GSA no longer in fact a competitor of floor wax manufacturers, the latter will lend every effort of their scientific personnel to give the government agency what it wants within the limits of practical formulation and production.

The problem of testing wax performance has never been solved. Maybe it never will be. Who knows? An interim formula specification might

be the first and easiest objective. From there, future work might be carried on. But that is for the committee to decide. Start the job. That's the important thing.

CHOOSEY BUYERS . . . Immediately after World War II when the armed services were discharging their personnel at a rapid rate, many a former enlisted man went far out of his way to harass, annoy and even insult those of commissioned status who were still in uniform. Remembering the indignities and buck-passing of his service days, he considered officers fair game wherever and whenever they might be encountered.

To a considerable extent, officer-baiting of post-war days reminds us of current spreading complaints about the quality of soaps, cleansers, polishes, and the like. It would seem that these complaints are taking on the proportions of an epidemic. A soap or a wax which was eminently satisfactory a year or two ago, no longer appears to meet the quality requirements of jobber or consumer. That they have become suddenly very quality conscious and extremely choosey is to put it mildly. The war is over.

Maybe there is something to the complaints. Maybe to meet the demands for lower prices, less coconut oil is being used in the soap, and so forth. But, maybe quality complaints are an excuse to reject goods or to beat down the price on threat of rejection. After studying soap and sanitary chemical buyers for thirty years, we incline to the latter explanation.

CREDIT LOG JAM . . . All down the line, as far as we can find out, bills are taking longer to be paid. Accounts receivable are up. Both manufacturers and jobbers seem to be holding the bag about equally. Industrial consumers, restaurants, hotels, hospitals, office buildings, all are taking longer to pay bills, and the jobber is taking longer to pay the manufacturer. Many accounts which a year ago were discounting or taking thirty days, have moved into the ninety and one hundred twenty day class. Although the great bulk of the accounts are good, the marked increase in outstanding money is not designed to make the average manufacturer feel too comfortable.

The current problem is as old as the hills. Those who refuse to be lenient with their customers who are stuck with a long list of outstanding accounts, are going to lose those customers. For manufacturers who are amply financed to withstand the gaff, the problem is less complicated. But, those who find their capital assets just about all in accounts receivable and inventory, are probably doing some sweating along about now. For those who can afford it, leniency in the present log-jam will probably pay off in the long run. It usually has in the past.

TRADE MARK SAFETY . . . Many owners of valuable trade marks for soaps, detergents, floor products, insecticides, and other chemical specialties have not taken advantage of the Federal Trade Mark Act of 1946, according to a prominent patent attorney with whom we recently discussed the subject. He pointed out that a greater sense of security is conferred upon trade mark owners by those provisions of the 1946 Act which limit the right of third parties to ask for cancellation of a registered mark to an initial period of five years. After this period, the trade mark becomes substantially incontestable.

In addition, registration under the federal law is in effect "constructive notice of the registrant's claim of ownership" and tends to prevent future claims of innocent adoption of the trade mark by others. In short, when a mark has been registered under the federal law, a newcomer is under the burden of making a careful search for registered marks which resemble any mark he plans to adopt. Such newcomer can no longer be an innocent infringer of a registered mark.

Unfamiliarity with the 1946 Federal Act may be essentially responsible for failure of many trade mark owners to register under it. As the facts were given to us, the subject is importantly worth looking into as insurance against future litigation.

as the reader sees it . . .

"Readers' Digest" Errors

Editor:

In your "In brief as the Editor Sees It" Department for April (S & SC. Apr. 1952, pg. 40.) there appears an editorial headed "Insect Advice". This deals with the recent article in "Readers' Digest". In this editorial it is said "On the whole, the report was well done and the recommendations technically sound".

We all know that chlordane is a very valuable and effective insecticide. However, the Production and Marketing Administration of the U.S.D.A. issued an "Interpretation with Respect to the Labeling of Household Insecticides Containing Chlordane". This is known as Interpretation 19, and was issued to our members as C.S.M.A. Bulletin No. 156-51, dated Sept. 14, 1951. A comparison of the statements in the Readers' Digest article and this Interpretation 19 shows some discrepancies.

There are other points of inaccuracy, but your statement about the "Brand Name" pesticides is excellent and I am sure we all agree.

H. W. Hamilton, Secretary,
Chemical Specialties Mfrs. Assn.,
New York.

* * *

Other readers have called our attention to the discrepancy between Interpretation 19 and the Digest article mentioned in Mr. Hamilton's letter.

—— ♦ ——

Fatty Alcohol Error

Editor:

In the March edition, you printed an extract of my article about fatty alcohols which appeared in the January issue of *Soap, Perfumery & Cosmetics*. This extract contains in many respects points which are not properly based on the article. A very unpleasant mistake was made in giving the figures in Table 3 of my article, i.e. instead of boiling point (760m) you printed "melting point," and instead of M.P.°C, "solidification point." . . . you must understand that I refuse all responsibility for the figures given in this respect. It may be advisable to draw your readers' attention to this mistake, as otherwise I shall gain the reputation of having published figures which are nonsense.

Dr. L. Schon
Cyclo Chemicals, Ltd.,
London, W.C. 2.

* * *

We regret the error which was wholly ours and hasten to publish Dr. Schon's letter to correct the record. —Ed.

—— ♦ ——

Same Error

Editor:

May I call your attention to an error in the article on "Fatty Alcohols," which appeared in the Production Section of your March, 1952, issue? In the column giving a review of some characteristics of chemically pure fatty alcohols, it should read "boiling points" instead of "melting points," e.g. the boiling point of lauryl alcohol is 255-259° (rather than a boiling range) whereas the melting point of lauryl alcohol is 24° C.

Steven Hollander, Ph.D.,
East Paterson, N. J.

* * *

Thank you, Dr. Hollander for your correction. Dr. Schon, author of the original article also called our attention to this error as noted above. —Ed.

—— ♦ ——

Specification or Quality?

Editor:

It is quite evident that to purchase floor wax by specification is a sure guarantee for getting inferior quality. At least that is the impression one would receive after attending the hearing called by the General Services Administration to discuss the Government's problems in the procurement of water emulsion floor waxes.

Wails and complaints were uttered by Government officials and manufacturers alike, all of which seemed to add up to the fact that it is impossible to satisfy the floor maintenance needs of Government activities with the materials purchased under the

(*Turn to Page* 143)

". . . it's a sales idea. You lose your false teeth in the big kettle and we offer a reward!"

New Lever House Opens

LEVER HOUSE, new glass and stainless steel headquarters of Lever Brothers Co., was formally opened on April 29. Mayor Vincent Impellitteri represented the City of New York at the opening of the $6,000,000, 24-story structure, which he termed the "Building of Tomorrow." Speaking for the company at the brief dedication ceremony were Lever president Jervis J. Babb, board chairman John M. Hancock, and Leo E. Kemp, oldest Lever employee in point of service (46 years), who represented the employees. The ceremony was brief and was centered around the unveiling of a plaque which reads: "The mission of our company as William Hesketh Lever saw it is to make cleanliness commonplace; to lessen work for women; to foster health; and contribute to personal attractiveness that life may be more enjoyable and rewarding for the people who use our products."

More than 200 top industrialists, business, educational, and civic leaders attended the ceremony and toured the building, which was built for the sole use of Lever Brothers Co. and for its four divisions—Lever, Pepsodent, Harriet Hubbard Ayer, and Good Luck.

The building is a streamlined structure of stainless steel and glass. Occupying the blockfront on the west side of Park Avenue between 53rd and 54th Streets, Lever House has the appearance of a giant letter L. The first floor is an open arcade and a glass-enclosed lobby. The second floor alone covers the entire site. Starting with the third floor, a glistening tower occupies only one fourth of the land area.

The narrow glass tower not only provides excellent working conditions for Lever's 1200 headquarters employees, but shares with its neighbors three precious commodities—sunlight, space and air.

Most of the ground floor consists of an open plaza and a garden with a willow tree, shrubs and flowers extending into the all-glass lobby.

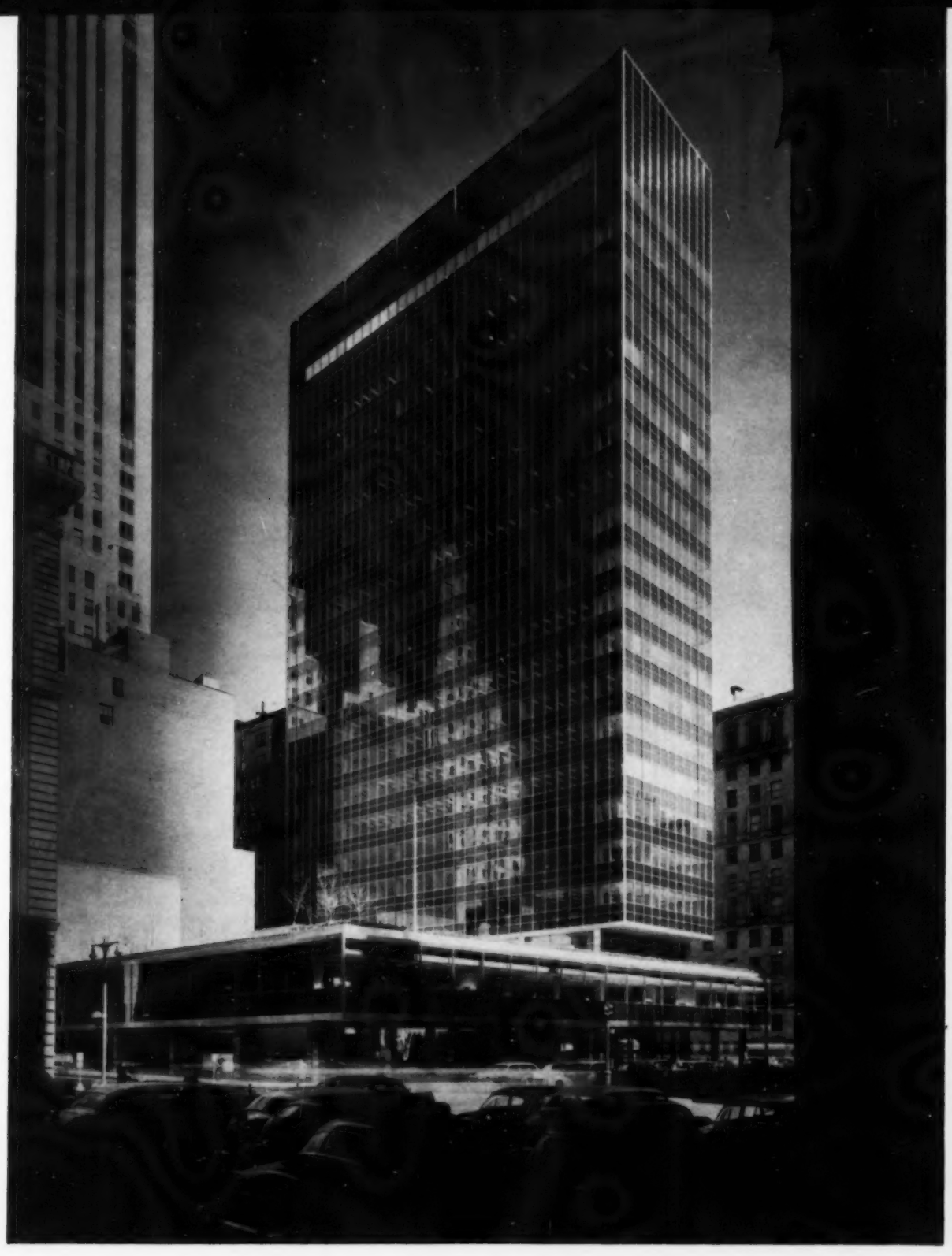
The open ground floor is a result of a survey which showed that this part of Park Avenue is not an active shopping area and that income from stores would not be commensurate with the capital outlay required to build them.

The landscaping is expanded to a third-floor terrace, which is planted with flowering crabapple and hawthorne trees and Japanese holly. The entire third floor is devoted to the terrace and cafeteria, where Lever employees may obtain low-cost meals.

Lever House is built on a conventional skeleton with more than 3,400 tons of steel used in its framework. It does not float in the air nor does it sit on stilts. It is supported on conventional steel columns which, sheathed in stainless steel, are visible instead of being concealed in walls.

The interior is completely air-conditioned, with three, year-round air conditioning zones operating on each floor. The sunny side of the building can be cooled while the shady side is being heated and the temperature

The Lever marketing committee from left to right, clockwise around the table: James A. Barnett, vice-president in charge of advertising and promotion, Lever Bros. Co.; Charles A. Massey, president of Lever Brothers, Ltd., Toronto; Jervis J. Babb, president of Lever Brothers Co.; Robert B. Smallwood, president Thomas J. Lipton, Inc., J. Laurence Heyworth, director, Unilever, Ltd., London; Franklin J. Lunding, chief executive officer, Jewel Tea Co., and J. Lawrence Dampier, sales vice-president, Lever Brothers Co.



Looking north at new Lever House on Park Avenue between 53rd and 54th Streets in New York City. Reflection of nearby buildings (center, foreground) may be seen on side of all glass surfaced 24-story structure.

View of one of the general offices in new Lever House. Sealed windows, air conditioning and special glass in windows are features of new building. No desk is more than 25 feet away from window.

The second-floor employees lounge affords a place of relaxation or recreation following a meal in the cafeteria for employees.

Typical of the executive offices is this office of M. J. Roche of the Lever advertising and sales promotion department. Modern furniture, wide windows are features.

Board of directors meet in this large, comfortable room (lower left) at northeast corner of 21st floor of Lever House.

throughout is comfortably blended and balanced by the central zone on each floor.

The blue-green glass in the building's 1,404 windows is treated to absorb more than 2/3 of the sun's heat. From the interior of the building the windows appear to be crystal clear.

In meeting the company's demand for cleanliness and comfort, the architects, Skidmore, Owings and Merrill, decided that a more efficient building could be erected at a greatly lowered cost if the windows could be sealed. The problem of washing sealed windows immediately presented itself. The architects agreed that if an exterior window-washing device could be developed, wired blue glass could be used instead of ornamental brick or masonry in the areas between the windows. The company asked the architects to invent a practical window-washing machine. The electrically powered window-washing machine, perfected and built by Otis Elevator Co., consists of a 10½ ton elevator car which operates on a standard gauge railroad on the roof and supports a 24-foot gondola from which two men can wash the entire outside of the building in six days.

All new furniture was purchased for Lever House, with 19 carloads of furniture and equipment in the general office areas supplied by Shaw-Walker. The metal desks have a glare-proof, light-colored linoleum top which may be easily washed. The desks are scaled to size for men and women with further adjustment possible to suit individual needs, have hooded

Main lobby on ground floor of building looks out on landscaped garden area, which is open to the public.

lubrication, silent finger-tip operating drawers, and rounded corners to prevent any snagging of clothing.

Automatic Mail Conveyor

FURTHER efficiency was obtained with an automatic mail conveyor, developed originally for hospitals and libraries and adapted for office use for the first time in Lever House. Operating quietly on an endless chain system, the conveyor automatically delivers mail to the correct floors and eliminates floor-to-floor movement of messengers. The passenger elevators in Lever House are electronically controlled to insure an even flow of traffic and abolish waiting. Artificial illumination is provided with glare-proofed, recessed fluorescent lighting. Cellular steel used in the flooring permits the drawing of electric and telephone lines to any square foot in the office area.

Private offices were kept to a minimum in Lever House, and an attempt was made in the floor arrangement to leave the general office areas open so that no desk would be more than 25 feet from a window.

An entirely new dimension was encountered by the decorators, Raymond Loewy Associates, in designing the interior of Lever House. This factor was the outdoors, which floods the entire building with the bright blue of natural daylight. The brightness was neutralized with a key color, which was named Lever House Beige, and which is used in the walls, ceilings, desks, and floors. The principal color-accented areas are the elevator lobbies, the stairwells, and the doors of private offices, all of which were treated gaily to provide variety throughout the building. A total of 32 colors was employed in the over-all decor.

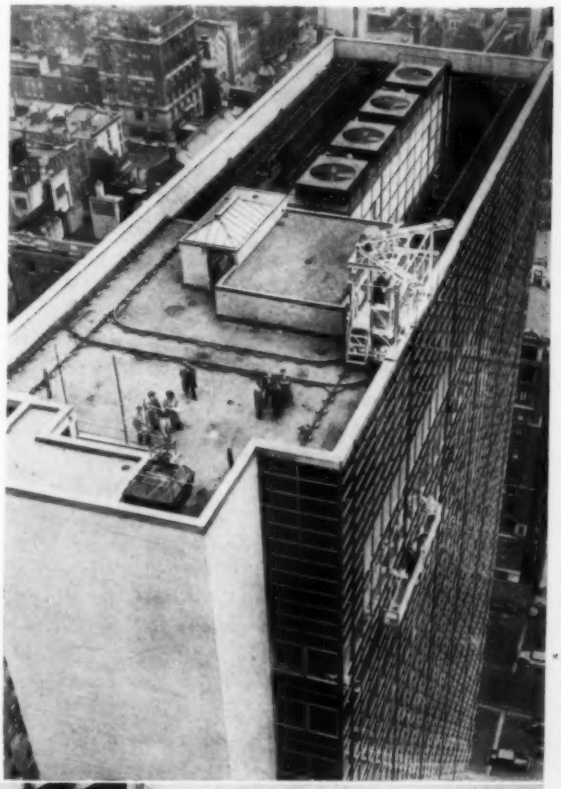
In order to make the building more liveable and functional, considerable attention was given to the non-office areas. The 1200 Lever House employees can be fed in the attractive cafeteria in two hours. Executives eat with the employees.

After lunch the employees enjoy the sun on the terrace outside the cafeteria or relax in a colorful second-floor lounge, which looks down on the ground-floor garden. Many of the women take advantage of the central location of Lever House to shop during lunch hour.

Opening off the rear of the ground-floor lobby is the Lever test kitchen devoted to the development and perfection of recipes for Lever's food products. It is under the direction of experienced home economists. Work in the kitchen can be observed through picture windows along the wall. Adjacent is an auditorium which can seat 200 people.

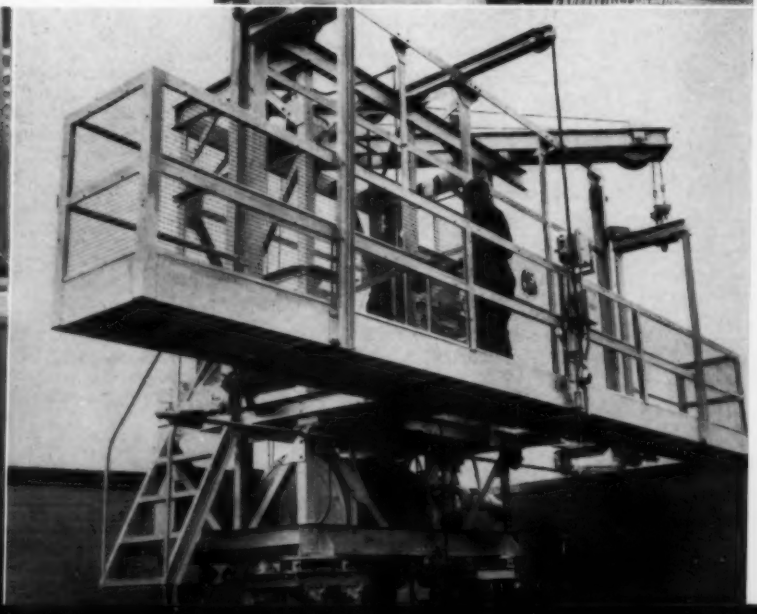
Adequate provisions were made for future expansion of the company, which presently employs more than 7100 people in Lever House and eight plants and 21 offices in the U. S. A total of 18,200 square feet of desk space is presently unused, including one entire floor which was left unfinished for future offices. The building is so designed that a wing can be added at the rear of the present tower without interfering with present office areas.

View of window washing apparatus in action. Platform on which window washers stand is shown at lower right in picture. Platform runs up and down on steel rails along sides of building. Tracks on roof on which the unit is mounted are shown in center. By means of this device all sides of the structure can be reached for washing. Building can be washed in six days by two men.



Modern office equipment features desks with linoleum tops and colors to match different shades in which various floors are done. Adjustable heights for desks are done. Adjustable heights for desks are possible as shown in photograph below.

Close-up (lower right) of window washing unit designed by Otis Elevator Co. for washing the all glass building exterior. Long platform is lowered down sides of building on rails. Rest of unit runs horizontally around roof on railroad tracks.



Testing of Packaging Materials

A PROPOSED test for the effect of alkali on various types of printed packaging materials was announced recently by the Packaging Institute, 342 Madison Ave., New York, 17. At the same time the Institute announced two other proposed test methods: ". . . Testing Packaging Materials for Fastness to Light by Use of the 'Fade-Ometer' " and "Testing Resistance of Ink on Printed Packaging Materials to the Product in the Package."

The new testing procedures are *proposed*, it was emphasized by the Packaging Institute, which is soliciting suggestions and criticisms from the package and other interested groups.

After these tentative tests have been given industrial trials, and criticisms have been weighed, the tests will be re-studied and revised if necessary. Each test is the result of work of a sub-committee of the printed packaging materials committee.

The tests are:

PI Printing 1p-51, "Proposed Test for Effect of Alkali on Various Types of Printed Packaging Materials," comes from the Alkali Test Subcommittee:

A. H. Twardowicz, Technical Director, Lord Baltimore Press, *Chairman*
Marshall Baldwin, Colgate-Palmolive-Peet Co.
C. A. Reynolds, Jr., S. D. Warren Co.

PI Printing 2p-51, "Proposed Methods of Testing Packaging Materials for Fastness to Light by Use of the 'Fade-Ometer' " comes from the "Fade-Ometer" Subcommittee:

C. A. Reynolds, Jr., S. D. Warren Co., *Chairman*
George Cramer, Sinclair & Valentine Co.
J. F. Hanlon, Johnson & Johnson
S. J. Worden, Nestle's Chocolate Co., Inc.

PI Printing 3p-51, "Testing Resistance of Ink on Printed Packaging Materials to the Product in the Package" (Product Resistance Test, for short) comes from the Product Resistance Subcommittee:

L. K. Burnett, Ohio Boxboard Co., Chmn.
Marshall Baldwin, Colgate-Palmolive-Peet Co.
A. W. Berry, E. R. Squibb & Sons, Inc.

The test on alkali and on product resistance follow. The test on light fastness involves use of a fade-o-meter, a scientific instrument which is not commonly found in soap and detergent plants and for that reason is omitted. Copies of all of the testing procedures are available from the Packaging Institute.

* * *

Test for Effect of Alkali on Various Types of Printed Packaging Materials

Purpose

This test is to determine the effect of alkaline materials on printed packaging materials such as paper, wrappers, labels, liners, containers, etc.

Examples of alkaline materials which may adversely affect printed packaging materials are: Cement, detergents, lye, soap, soap powders, etc. Such substances may cause discoloration of the packaging materials or discoloration of the printed matter because of the alkaline nature of the packaged product. The proposed test will give an indication, at the point of use of the printed packaging materials, of the possible effect of the alkaline substance on the printed package.

The proposed Alkali Test is a spot reaction test to produce rapidly an indication of the susceptibility of a printed package to alkaline contents or substances with which it may come in contact. It does not, however, replace the six-month storage test which, for safety, should always be carried out, even when the results of the quick Alkali Test show that the printed package is presumably safe from discoloration by alkali.

Apparatus

The apparatus required for the test is listed below:

1. Four clean graduated glass cylinders, 5 ml. or 10 ml., graduated to ml. and tenths of ml.
2. At least four clean medicine droppers.

Chemicals

Standard stock solution of 1 percent NaOH (Sodium Hydroxide). This solution is to be diluted in small quantities as directed below (for use in the tests) by means of the graduated cylinder.

To prepare 0.5% solution, add an equal volume of water to, say, 1 ml. of the 1% NaOH solution in the graduated cylinder. Mix by shaking.

To prepare a 0.25% solution, add 3 volumes of water to one volume of 1% NaOH solution in the graduated cylinder. Mix by shaking.

To prepare a 0.1% solution, add 9 volumes of water to one volume of 1% NaOH solution. Mix by shaking.

Prepare fresh dilutions for each day's work.

Preparation of Test Specimen

Place the material to be tested on a flat, clean surface. Mark off several areas with a lead pencil so that each area will include a portion of each kind of ink or color, and some of the unprinted paper if any of the latter is exposed.

Procedure

1. Make up either 5 or 10 ml. of 0.5%, 0.25%, and 0.1% strength Sodium Hydroxide, as directed under CHEMICALS.
2. Mark each area with the strength of the alkali solution to be used for testing it. Apply *one drop* of alkali solution of the corresponding strength to each different kind of ink and to the unprinted paper. Do not spread the drop. Avoid moving the paper during the test.
3. Test each area in turn with 1%, 0.5%, 0.25% and 0.1% Sodium Hydroxide solution. Use a separate, clean, medicine dropper for each dilution. In order to identify the spots where drops of alkali have been placed, indicate their location by penciled arrows pointing toward the drops. Allow the paper to remain undisturbed at room temperature and humidity until the drops have dried.

Examination of Tests

After the alkali drops have been allowed to dry spontaneously on the papers, observe carefully the effect of the different strengths of alkali solution on each color and on the unprinted paper.

1. Note with respect to each strength of alkali and each color, whether the alkali has produced an undesirable or harmful change.
2. Observe also the reverse side of the paper to determine if alkali has come through from the side on which the test was made.
3. Note also whether any of the colors have bled through from the printed side.

Report

Report for each strength of alkali solution either:

1. No discoloration or change of each color tested.
2. Slight discoloration or change of each color tested.
3. Pronounced discoloration or change of each color tested.

Also report:

4. Penetration of paper by alkali.
5. Bleeding of colors.

Interpretation

This Alkali Test can also be used to determine whether various protective coatings, such as vinyl lacquers, will withstand at least a 0.25% solution of Sodium Hydroxide. If no blistering of the coating, or discoloration of the back of the wrapper occurs, then the coating is satisfactory for packaging materials.

This type of test originated at Colgate-Palmolive-Peet Company and is used extensively there. The Lord Baltimore Press also uses this test in its routine quality control.

* * *

Testing Resistance of Ink on Printed Packaging Materials to the Product in the Package

(Product Resistance Test=Short Name)

Scope and Purpose

This method is designed to evaluate the resistance of the ink on printed packaging materials to the product being packed. Since flat sections can be taken from some packaging materials while others must be tested in their original rigid form, provision is made for testing either type of sam-

Proposed tests for determining effect of alkaline materials on printed packaging materials and tests for light fastness and resistance of ink on printed packages issued recently by Packaging Institute

ple. Since products may come in contact with the ink on the packaging materials in either solid, liquid, paste, water mixture, or solution form, the testing method provides means of testing with products of these various types.

Apparatus and Materials

1. Product to be packaged.
2. Sheets of unsized, unbleached muslin, 4" x 16" folded to 4" x 4".
3. Test weights, 3" square in surface area, weighing 12 oz. each and conforming to the contour of surface to be tested.
4. Suitable vessel for making up solution or mixture where the product is normally used in a mixture or solution.
5. Distilled water.
6. Cabinet in which humidity can be controlled at 85 to 95% relative humidity or bell jar and beaker.
7. Flat testing surface, such as, glass or hard wood.
8. Scotch tape and/or rubber bands.

Test Specimens

Where possible, cut a flat section or section 3" x 3" from the printed packaging material to be tested so that all colors are available for test. When dealing with rigid packages from which it is not possible to cut flat sections (example, a printed ampul or bottle), the packages can be used in their rigid form. A sufficient number of packages should be used so that all colors are available for test.

In all cases, the ink must be dry and the sample for test shall have been printed longer than 72 hours.

Procedure

1-A If the product is a solid:

(a) Cut a fresh sample, approximately 3" x 3" x 1", and then slice this fresh sample into two slices, approximately 3" x 3" x ½".

(b) Place the test specimen between the two pieces of the cut fresh sample, being careful to place the two surfaces in the same direction as they were before being cut.

(c) To hold the two pieces of the fresh sample in contact with the printed specimen, place a test weight on top of the fresh sample to hold it together under pressure.

1-B If the product is in granular or powdered form and is used in that condition:

(a) Place a quantity of the product in an open tray that is large enough to accommodate the test specimen.

(b) Place the test specimen on top of the product so that it is in contact with the product.

(c) Hold the printed specimen in contact with the product by means of a test weight, rubber band, or some other means so as to guarantee contact of the test specimen with the product.

1-C If the product is used in liquid, paste, water solution or water mixture form:

(a) Place the test specimens on a flat surface with the printed side up. If a rigid package is being tested, it must be supported so that the printed side is up.

(b) Place 10 cc of the liquid or paste product or a water solution or water mixture of the strongest concentration of the product which might be in contact with the printing on one of the 4" x 4" squares of folded, unsized, unbleached muslin. The product should cover an area approximately 3" x 3".

(c) Place the muslin on which the 10 cc of the product or product solution has been placed on the specimen for test and place a test weight on it. If necessary, hold the product and weight in place with Scotch tape.

2. Store the test assembly at 85 to 95% Relative Humidity and room temperature or at the highest temperature under which the product would normally be stored for 10 minutes to 24 hours, depending upon the severity of the test required. If a relative humidity cabinet is not available, the above humidity can be attained by placing a beaker of distilled water next to the test assembly and covering the test assembly and the beaker with a bell jar. The bell jar must make reasonably good seal with the flat testing surface.

3. At the end of the test period, remove the weight and the product. If necessary, wash with distilled water or some solvent which has been found to have no effect on the finish of the packaging material. Examine the product for discoloration. Where muslin was used, note whether it shows ink transfer or stain. Compare the tested area against an untested sample for change in color, bleed, fade or other changes.

Report

The report shall state the relative humidity and temperature conditions under which the test was carried out. It shall also show the concentration of product used for the test and the length of time which the product was left in contact with the printing. The result shall be expressed as

(1) No change in product or in ink.
(2) Slight change (describe).
(3) Excessive change (describe).

Chem. Exposition Plans

The seventh National Chemical Exposition, to be held in the Chicago Coliseum Sept. 9 to 13, is going to have an exhibit of industrial uses of atomic energy, it was announced last month by the Chicago section of the American Chemical Society, sponsor of the event.

The display will be prepared in cooperation with the Atomic Energy Commission and a full day's program of discussions is to be devoted to the subject. Another half-day symposium will be devoted to the general theme of "The Future of Chemistry," the program committee also announced. Some 200 manufacturers of chemical supplies and equipment will exhibit in the Coliseum, where 90 percent of the available space had been reserved last month. A number of cooperative activities are being worked out with the Centennial of Engineering, which is to be observed in Chicago on dates partly coinciding with the Chemical Exposition.

Cationic
Surface Active Agents

By Vladimir Dvorkovitz
Diversey Corp.

THE subject of surface active agents is very large. It includes a wide variety of apparently unrelated phenomena as, for example, the reason for the efficiency of special lubricating oils and the use of soap in laundering operations. To amplify, surface active agents are added to lubricating oils that adsorb from the oil onto the metal surfaces in such a way that under extreme pressure when the oil is squeezed out, the metals are prevented from seizing because the adsorbed film is so strongly held that it remains to separate the metal surfaces.

It is well to remember in considering surface active agents that their action in aqueous systems, though it encompasses a vast and complex field, is only a limited phase of a more general problem.

Water is cheap, readily available and anything that can affect its properties can become of tremendous industrial importance. Let us consider a few examples of its use. For dyeing textiles, water is a cheap carrier for the dye and after its use can be disposed of easily and economically. For disinfection of relatively large surfaces, water can act as an execellent carrier to allow a relatively small quantity of the active disinfectant to reach all parts to be treated. For use in washing dirt from a surface, the water is more intrinsic to the operation than as a carrier or diluent for more efficient processing.

In all cases, the fact that the water does not wet the surface easily is a handicap. The dye might streak due to uneven application, disinfection might not be complete and washing would be arduous and involve considerable physical effort. In any case, a substance that could be added to the water—a surface active agent—that could produce better wetting would represent a substantial improvement.

When soap was our only surface active agent, its particular properties often determined the destinies of whole industries. The textile processing industries were always located in areas that had a plentiful supply of soft water to take advantage of the fact that soap needed water of low hardness for maximum efficiency.

Distinctive Properties

THE distinguishing properties of surface active agents for aqueous systems is a molecular asymmetry. The molecule must contain, in two parts, a water compatible or hydrophil or a water incompatible part or hydrophobe. The latter is usually a long chain organic product structurally related to oils and fats, while the hydrophilic part is usually an ion or a radical that has enough excess electric charge to allow for hydration and the formation of complexes with water in solution which are, in many ways, similar to the way H_2O polymers exist in solution as compared with its gaseous state. This hydration around the surface active molecule allows for apparent solution of the product since it is thus broken-down from its original aggregate into individual molecules surrounded by water. When the hydrophobe of an ionizable product is the cation, we have a cationic agent and similarly for an anionic agent. If the product has the necessary requirements for a surface active agent but does not ionize, then it is non-ionic.

This asymmetry, which is an essential characteristic, causes inherent instability of the aqueous solution in which it is dissolved and many of the effects that are properties of surfactants, as it has been suggested they be called, are due to this instability and the effort the solutions make to assume more stable states.

Thus, two of the main effects caused by this instability are the formation of micelles and orientation at a surface. This second factor allows for the phenomenon of wetting, emulsification and detergency. In this connection, if the molecule were aligned so that the hydrophobe was adjacent to the air or other surface and the hydrophil in the water—the inherent instability is partly overcome. Surface active particles therefore, would tend to concentrate or be adsorbed at the interfaces. In the cleaning of surfaces, this adsorption separates or loosens the bond between the surface and the contaminant so that either freely or with some slight agitation or disturbance such as convection currents, if the solution is heated the contaminant or dirt particles become suspended in the solution. However, these particles in a simple state of suspension could be redeposited. A good example is the "Tattle Tale grey" washings of our contemporary advertisements. This redeposition does not happen if the soap forms micelles around each dirt particle and holds it permanently in solution. A micelle occurs where several surface active particles have formed a circle or ball

with their hydrophils on the exterior in the water and with their hydrophobes all close together and forming a hollow chamber in which the dirt reposes.

Let us now consider some of the cationics with regard to their chemical structure. To have a hydrophobic cation, it is essential that some part be capable of combining with a proton. This does not happen too freely and we find that cationic agents are mainly substituted ammonium, sulfonium, arsonium and prosphonium compounds that have at least one large organic group. Of these only the ammonium compounds have been commercially developed to any great extent. The phosphonium compounds are, however, in an active state of development and we can expect many new specialties based on a phosphonium structure. A very recent development is the use of 3,4 dichlorobenzyl triphenyl phosphonium chloride which is a quaternary for protection of woolens against moth damage. This product has a strong affinity for wool and is easily applied from an aqueous solution and can resist almost unlimited washings. In fact, a mixture of this cationic with a non-ionic detergent can be used for simultaneous cleaning and mothproofing. Such a product and more like it probably will appear soon and promise to have an excellent potential.

Amines Main Cationics

THUS, the amine derivatives are the main cationic surfactants. The inclusion of a large hydrophobe in an amine gives a product that is insoluble in neutral or alkaline solutions. In acids, solution is complete and it exhibits all the characteristics of a soap solution. Such amine products have limited use as surfactants because of the few uses in acid solutions. An important exception is their continually expanding use as corrosion inhibitors where they are added to acids in contact with metals to reduce corrosion due to the adsorption of the amine on the surface of the metal which can act as an effective mechanical barrier to lessen the action of the acid on the metal.

Fortunately further reaction of a completely substituted amine with an alkyl halide or similar compound gives the so-called quaternary ammonium salts that are soluble regardless of the pH of the solution. Thus the main cationic surfactants are quaternaries.

Examples of cationic, anionic and non-ionic surfactants can be made that appear to be equal at least as far their wetting power is concerned. In general, though, parts of the molecules of all three classes can contain similar structures, the cationic agent is more costly and difficult to manufacture. The three classes compete with one another and it has been inevitable that if their performances are equal, the cationic is not used. However, a large number of uses have been found for which a cationic is preferred even at the premium price because of some special properties or advantages. It is these combined uses that have made the sale of cationics a large volume item even though it does not approach the tremendous figures that the synthetic anionics have reached and what the non-ionics appear to be reaching.

Probably the greatest single difference between the cationics and the anionics is that the former are much more strongly adsorbed onto surfaces. Thus, if a surfactant is used for the washing of clothes or the cleaning of metal surfaces, we know that the act of cleaning involves the deposition of the surfactant on the surface whereby it displaces the soil. However, the adsorbed surfactant is itself a contaminant and most often has to be removed. Adequate rinsing with fresh water is sufficient to remove the anionics in most cases but it is very much harder to remove the cationic and special treatments might well be necessary. This in itself is an excellent reason why cationics are not used for regular cleaning and detergency operations, a field that has been monopolized by the anionics either soap or synthetics. However, the same property of strong adsorption onto surfaces is the basis for practically all of the major uses of the cationics today and for which the consumer willingly pays the premium price over the anionics and non-ionics.

Two Main Uses

TWO of the main uses for cationic agents occur in the textile industry and as flotation agents. The textile industry is the proving ground for all surfactants and since the field is so large examples are illustrative and informative.

Bleaching and dyeing and the various treatments to prevent wool from felting and shrinking have a harshening effect on fabrics. In the old days this was counteracted by their treatment with soap or oil emulsions. This soft effect did not last long and seldom survived a few washes. Now a variety of quaternary surfactants are sold to the trade as softening agents. They perform well and are reasonably resistant to repeated washings and dry cleanings. The softening is due to a lubricating action of the individual fibers. The fibers adsorb a thin layer of the cationic which reduces the friction. The fact that the agent is a surfactant is immaterial, the fact that it is a cationic causes it to be firmly and rapidly adsorbed. These agents are sufficiently varied that the degree and quality of the hand of the fabric can be selected at will. Repeated washings with soap or anionic surfactants tend to remove the cationic by a mutual interaction. This can be avoided by the use of non-ionics.

There are two new uses in the textile industries for cationics that depend on their adsorptive power. Direct dyes on cotton have a tendency to bleed and to wash out. By dipping the dyed fabric in a warm solution of a cationic, the dye is fixed and the tendency of the dyes to bleed or to be washed out is considerably reduced. Similarly, if cellulosic fabrics are dipped in a cationic solution, the fibers take on an affinity for many acid wool dyes and even chrome mordant dyes that could not otherwise be used with cellulosic products. Probably the neatest use for cationics is to confer practically permanent water repellency to a fabric. This process discovered in Germany in 1930 has been used extensively ever since.

"Zelan" is the trade name that one commonly associates with products so water-proofed. The process consists of dipping the fabric or garment into a solution of the cationic agent which could be a stearamido methylene pyridinium chloride together with sodium acetate. This cationic is absorbed in the usual way and then the fabric is dried out at about 120° C. for a few minutes when decomposition occurs. Pyridine and hydrochloric acid are liberated, the latter reacts with the acetate which was used. Otherwise the free hydrochloric acid would tenderize the fibers, while a high molecular weight waxy solid complex residue stays behind intimately coating each fiber and which is the basis for the water repellency. There have been improvements and modifications since the original process was disclosed. A recent series of patents from I.C.I. in England disclosed new, more complicated products that act essentially the same and for which they claim softness and crease resistance as well as water repellency.

Micro-biocidal Agents

THE last major field for cationics that will be considered here is their use as micro-biocidal agents. It would not appear that such a use has any relation to superfactants yet the phenomenon whereby in an unstable medium the hydrophobe goes to the interface with resultant adsorption appears to be the reason for the action of quaternaries in preventing microbiological growth. Furthermore, their effectiveness in this respect closely parallels their effectiveness as surfactants though there are some apparent exceptions.

Bacteria and wool are proteins for which the quaternaries have a great affinity. Previously we have indicated how anionics and soap tend to remove the adsorbed quaternary on wool. It has been found that likewise quaternaries can be removed from bacteria that were formerly thought to be dead by the use of soaps or anionics as neutralizing or inhibiting agents and that, as a result, in a suitable medium the bacteria can revive and grow in its usual way.

There has been a tremendous amount of research published on the use of quaternaries as bactericides but much of the early work must be disregarded because the investigators failed to realize the important effect of the cationic being strongly adsorbed on the bacteria with the possibility of desorption by suitable agents. Thus, in many cases where the quaternary was thought to be a bactericide it is now known that it acts more as a bacteriostat and prevents rather than destroying growth.

Many organisms are relatively susceptible and succumb and die when their normal life environment is slightly changed. With such organisms the quaternary can be effective and the organism will die, others however are more resistant. As an extreme we could consider certain spores such as *thermoacidurans* that can be prevented from growing by a long exposure in the presence of high concentrations of quaternary and yet when seeded in a suitable medium with a neutralizer for the quaternary, can germinate and resume their normal life cycles.

For use in surgical and dental practice for the cold disinfection of instruments or preparation of skin

(*Turn to Page* 129)

Award winners in the 1952 Set-Up Paper Box Competition, sponsored by the National Paper Box Manufacturers Assn., Philadelphia, held May 11-14 at the Association's convention at the Hotel Drake, Chicago, where entries were exhibited include:
Blair "Threesome" box, which won second award in soap products. Old Dominion Box Co., Lynchburg, Va. manufactured the box for Morton Manufacturing Co., Lynchburg, Va. The first award in soap went to Fair Martin Boxes, Inc., Concord, N. C. for its family of soap boxes made for Carolina Co., Pinehurst, N. C. Honorable mention in soap products went to Central Carton Co., Cincinnati, for its three-drawer re-use soap box made for Hewitt Soap Co., Dayton, O. Honorable mention in superiority of construction was received by W. C. Ritchie and Co., Chicago, for a bubble bath package manufactured for Allen B. Wrisley Co., Chicago. Winner of an honorable mention in drugs was Walter P. Miller Co., Philadelphia for its packaging on antiseptics made by Hydrol Chemical Co. Philadelphia.

Kettle House Operation

By Dr. J. L. Boyle

EFFICIENCY in a factory can be maintained only by picking out the potential trouble spots and devoting particular attention to them. In a soap factory, the kettle house is at the heart of things and therefore no excuse is required for an article such as this, which attempts to pin point possible sources of trouble here and explain how to avoid them. Trouble foreseen and avoided is definitely a point scored in the efficiency rating.

Lye Reduction

LYE reduction is the process of reducing the alkali content to as low a value as possible before passing the lye for glycerin recovery. It is done by using the lye to wash stocks containing free fatty acid. The fatty acid reacts readily with the alkali and there should be no difficulty in getting the reduced lye down to an average of 0.3 percent total alkali. The advantages of effective lye reduction are that it keeps down the amount of caustic needed for saponification; less sulfuric acid is needed for the purification of the lye, which precedes the glycerin evaporation and, as a consequence of this, less sodium sulfate is found mixed with the sodium chloride recovered from the evaporator. Sodium sulfate is undesirable because it adversely affects the graining power of the salt.

It is always inadvisable to use open steam in this operation because reduction can be as effectively done without it and by increasing the volume of lye it puts extra work on the glycerin evaporator. Actually the extent of lye reduction is determined mainly by the percentage of free fatty acid in the stock through which the lye is passed. A judicious, planned choice at this point means a great deal subsequently. Boiling should be avoided entirely if possible, or, at any rate, kept to a minimum because the lower fatty acids are soluble in boiling water and will be carried away to the lye settling tanks. For this reason, air agitation, if available, is to be preferred.

This may be the best time to draw attention to the advantage of not allowing dirt and mud to build up in the lye storage tanks. This sometimes is forgotten owing to the usually obscure position of these tanks in the factory and the fact, that often they are a sort of buffer between two departments—the kettle house and the glycerin recovery plant. Mud in these tanks is a bad thing, first, because it leads to errors in the glycerin inventory and second, because it encourages the progress of fermentation, a tendency to which is always present, and so results in a loss of glycerin.

Saponification

THE main point to bear in mind about the saponification or "killing" change is that it should result in as high a degree of saponification of the fat stocks as possible. To this end it is desirable that the soap at this stage should be devoid of free fatty acid and should contain up to 0.2 percent of free alkali. The corresponding alkalinity of the killing seat is less easily defined but the general aim should be to hold the density as low as is consistent with producing an open condition and a lye free from soap. The density should be just above

the point at which the lye would gel due to an insufficiency of salt. The reasons for this are that the thinner lye penetrates the charge more easily during the boiling period and so leads to a more rapid and complete saponification; there is also the incidental advantage that by keeping down the salt content at this stage, there follows a reduction in the quantity of recovered salt which the glycerin department has to handle. The cost, often unknown, of dealing with recovered salt is surprisingly high in most factories and this alone may make attention to this worth while.

The most successful way of insuring complete saponification is by thorough boiling. The soap should be kept boiling steadily throughout this operation but open steam should not be used because of the dilution which it causes.

Washes

TURNING to the question of the number of washes that should be included in a schedule, the main deciding factor is the capacity of the particular kettle house. In general, the value of the glycerin recovered by extra washing has to be balanced against the steam consumption of the latter. It will be found that, on these grounds, a third wash is profitable and, if at all possible, it should be fitted into the schedule.

In all wash systems, the aims are first, to introduce as much of the water as far back in the system as possible and, secondly, to add the caustic as early as is practicable. These are the two basic principles, so to speak, of washing. Their particular application will vary according to local conditions and therefore this discussion cannot be more specific in the matter. In most cases, the first wash may be double the volume of the killing seat; the second will depend on particular conditions; the last will be so adjusted as to give the scheduled overall volume of lye for that particular charge.

The choice of when to use open or closed steam for heating washes is important. Open steam can be used at all times before the soap is grained but once this has taken place and lye is expected to drop out, then only closed steam should be used for heating. The reason is the fairly obvious one, that open steam by diluting the mass, would affect the condition of the soap.

Pitching Soap

WHEN it is desired to draw off a nigre before "finishing" the soap, water is added and open steam injected to puff the soap until the latter is in a smooth condition. It should then settle for at least three hours. This is an operation which depends mainly on the personal judgment of the operator, to know when the end point has been reached in the matter of water and steam addition. If possible, the water should be hot and it should be added slowly. Boiling should be continued for about an hour, using only open steam. Occasionally it happens that the soap contains so much electrolyte that an excessive volume of water would be needed to pitch it; in such cases, the best practice is to add just as much water as is needed to soften the grain of the soap, let it settle and draw off the lye before proceeding with the pitch.

Handling Nigres

THIS is one of the chief factors on which the quality of the finished soap depends. Taking a nigre from a nigre will improve the color but the dirt usually is only transferred to another system, not removed entirely. Therefore, the best way in the long run to maintain a good standard of color in the kettle soap is to grain out the nigre, with a low density lye from which mud will settle out freely. This is not always easy because sometimes under these circumstances, the nigre lye tends to form a gel and more salt must be added to overcome this. The main objective is to cause the maximum deposition of mud and so, enough salt may be added to achieve this but no more than is necessary. In practice, form a soft grain and boil slowly and continuously for about two hours to allow the dirt to pass into the lye.

Faults in Kettle Soap

ONE of the commonest sources of dirt in kettle soap is the use of dirty scrap. A separate tank, where dirt can be removed before the scrap is returned to the kettle, is the best way of cutting out this source of trouble. Screens in the return lines are also helpful.

High caustic or salt figures in soap usually indicate that not enough nigre has been taken off. Gumminess, another common fault, is due to an insufficiency of salt from the strong change and an excessive use of water when pitching. The low salt content allows the excess water to stay in the soap layer with the consequent development of this fault.

The possible causes of high glycerin in soap are too numerous to be treated in detail. In outline they are: incomplete saponification; inadequate boiling or unduly small washes; too much salt or caustic in washes or saponification change; the occurrence of puffed soap at some stage.

The writer hopes that this discussion will help some soap boilers to pin point a few of their trouble spots and that even those, who disagree with his comments on the half dozen aspects of kettle house operation which are dealt with above, will be stimulated to consider each of them anew in relation to their own practice. If so, it is not unlikely that improved efficiency will follow and the writer's object will have been achieved.

Fatty Acids Output

February production of saturated fatty acids amounted to 14,254,000 pounds, substantially unchanged from January levels, the Association of American Soap and Glycerine Producers reported recently. With a slight increase in disposition, stocks declined 1,192,000 pounds during the month to 17,031,000 pounds at the close.

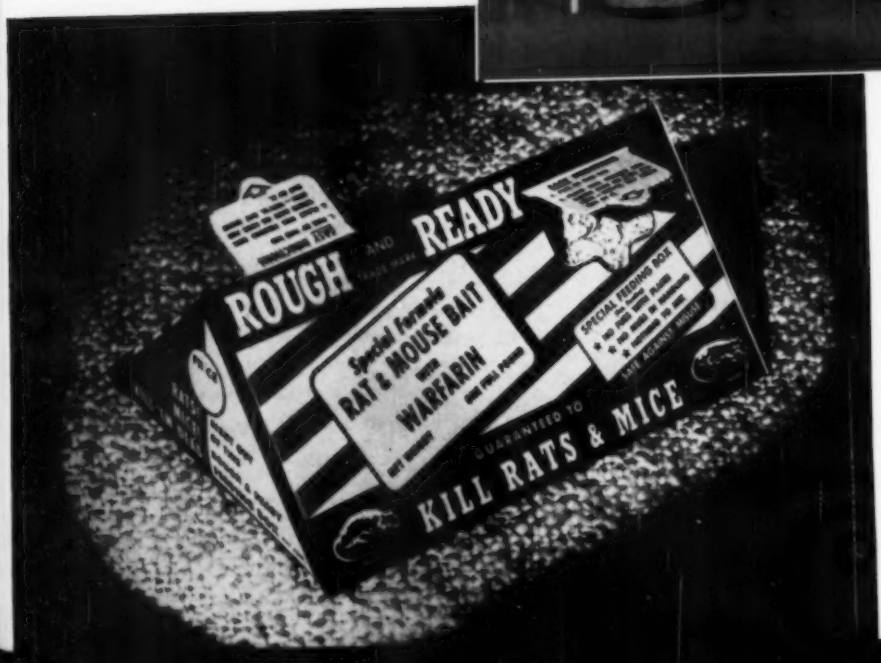
Production of unsaturated fatty acids in February amounted to 15,645,000 pounds, a moderate increase over January. Disposition was also moderately higher, and stocks declined 1,663,000 pounds during the month to 24,717,000 pounds at the close.

Total fatty acids production during February was 29,899,000 pounds. Total consumption was 32,638,000 pounds, of which total 14,830,000 pounds were saturated acids and 17,808,000 pounds were unsaturated acids.

WHAT'S

Above: newly designed gift set of shaving essentials for Father's Day, June 15, by Alfred McKelvy Co., New York, makers of "Seaforth" men's toiletries. Packaged in shiny red and gold box, the set includes the new "Presto-Lather" shave cream (or "Veladon Brushless"), and a polished jug of "Seaforth" shave lotion. The combination sells for $1.50.

Pint size "Voo Doo White Magic Insecticide" is being merchandised with free sprayer for a limited time, according to recent announcement of Xterminator Products Corp., Jersey City, N. J. Insecticide contains technical chlordane. Pints are packed 12 per case. New counter display in background. Item with sprayer retails for 89 cents.



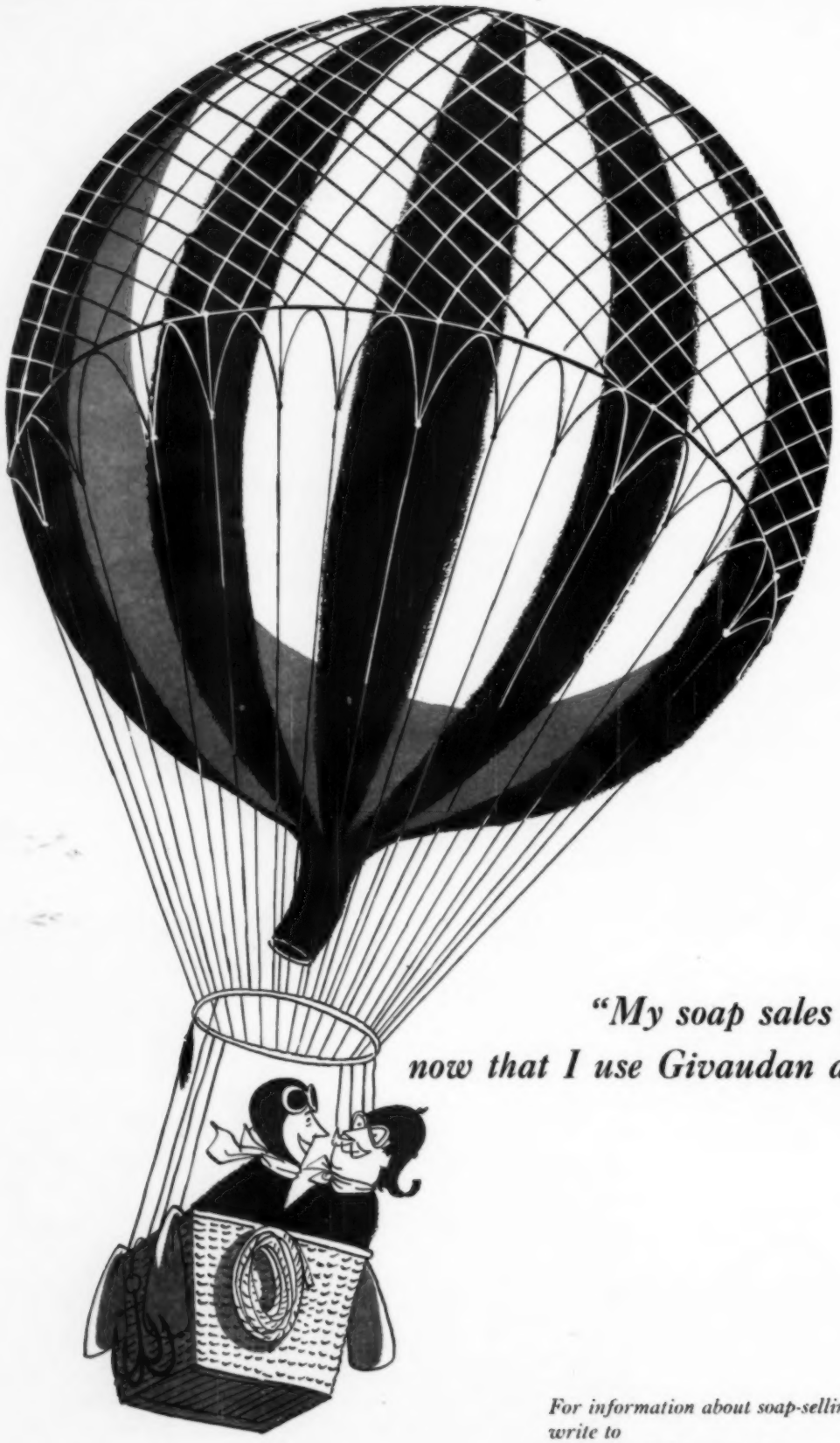
New rat and mouse bait packaged in triangular shape containers that also serve as a bait station was announced recently by J. T. Eaton & Co., Cleveland. The bait, which contains warfarin, comes in a one-pound package sold under the Easton "Rough and Ready" trade name.

NEW?

New "Pine-Air" household cleaner, disinfectant and deodorant in eight and 16 ounce packages is the newest item to be added to the line of Delta Chemical Co., Memphis, Tenn. It is being distributed through drug and grocery outlets south of the Ohio River from the East Coast to the Rocky Mountain area. "Duraglas" bottles and metal closures are supplied by Owens-Illinois Glass Co., Toledo.

A Daggett & Ramsdell, Newark, N. J., offering for Father's Day is a bright red gift package containing a six-ounce bottle of after shave lotion and a black plastic bowl of shaving soap. Normally a $2.00 seller, set retails for $1.50.

New liquid cleaner of S. C. Johnson & Son, Inc., Racine, Wis., announced recently for removing rust and corrosion from chrome and stainless steel. It is the newest addition to the company's line of automotive products. Retailing for 50 cents in an eight-ounce can, it is applied by pouring on soft cloth and the metal rubbed until clean. Purchasers of Johnson companion products "Car-Plate" and "Car-Nu" receive chrome cleaner free for introductory period.



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For information about soap-selling fragrances, write to

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News

Lever Advances Bunnell

Appointment of David J. Bunnell as general manager of the buying division, Lever Brothers Co., New York, was announced late last month by Jervis J. Babb, president. Mr. Bunnell, who is in charge of the buying of fats and oils at the New York headquarters of the company, joined Lever Brothers Co. in 1948 and has been located at the Chicago office of the buying division.

DAVID J. BUNNELL

He has had more than thirty years' experience in the fats and oils business, having started as a buyer for the Crawfordsville Seed Co. of Crawfordsville, Ind., in 1920. Prior to joining Lever Brothers, he was president of the Northwest Linseed Co. of Minneapolis, and before that was vice president of the Central Soya Company, Inc., Ft. Wayne, Indiana. Mr. Bunnell is a member of the Midwest Fats and Oils Club and the Chicago Feed Club. He succeeds Emerson G. Morse who resigned.

Atlantic Names Macon

Atlantic Refining Co., Philadelphia, recently announced the appointment of James Ralph Macon as market and product development manager of chemical product sales. Mr. Macon is a graduate of Emory University, Atlanta, Ga., and prior to his joining Atlantic he was with Pennsylvania Salt Manufacturing Co., Philadelphia, as a market development engineer and later as supervisor of ordnance sales and service.

Wyandotte Advances Tholen

Appointment of Fred H. Tholen as sales manager of the J. B. Ford Division of Wyandotte Chemicals Corp., Wyandotte, Mich., was announced recently. Mr. Tholen has served in advertising, sales, and packaging departments of Wyandotte since 1922.

Deupree on Morgan Board

Richard Redwood Deupree, chairman of the board of Procter & Gamble Co., Cincinnati was recently elected a director of J. P. Morgan & Co., New York. In addition to holding directorships in other companies, Mr. Deupree, previously president of P & G, is a member of the Business Advisory Council of the U. S. Department of Commerce.

New Kohnstamm Executives

Four changes in the executive personnel of H. Kohnstamm & Co., New York laundry supply and detergent manufacturer, were announced recently by Louis J. Woolf, president.

Robert A. Phair, who has been with Kohnstamm since 1912, has been named vice-president. Previously he served as secretary of the company. In this post he is succeeded by Paul Kohnstamm, son of the late president. He joined the organization six years ago.

Robert J. Pulver has been named as a member of the board of directors. He is also managing Kohnstamm's mid western sales operation.

William H. Nelson, with the firm for 30 years, assumes the duties of assistant secretary of H. Kohnstamm & Co., which was founded in New York in 1851.

Cowles Elects Huntley

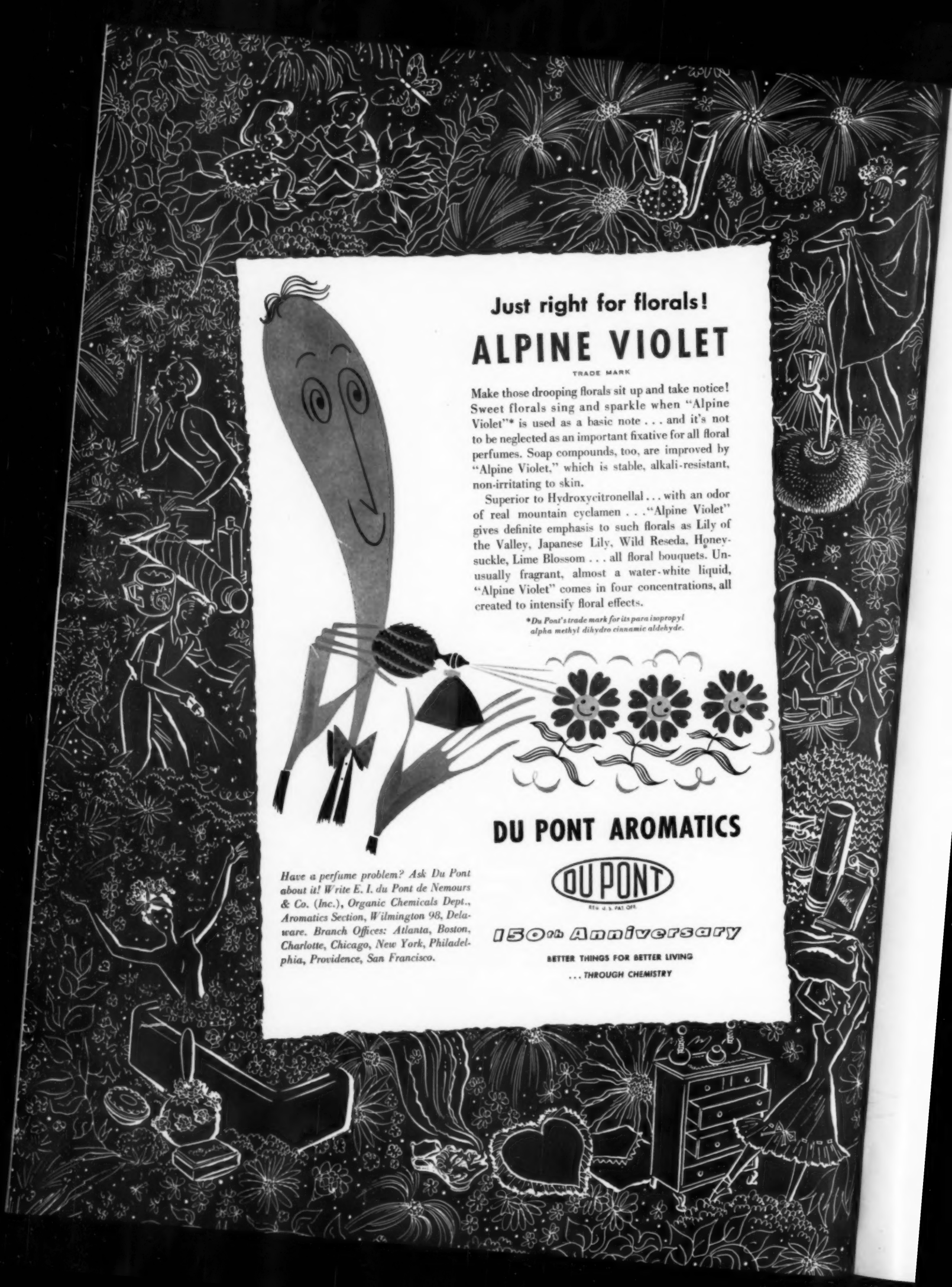
Robert F. Huntley was elected president of Cowles Chemical Co., Cleveland, at the organizational meeting of company directors held April 8. He succeeds Edwin Cowles, who continues as a director. Mr. Huntley came with Cowles in July, 1942, as assistant to the president, after serving as technical director for the Sealright Co. In September, 1942, he was elected to the board of directors and appointed vice-president and general manager. In his new post, Mr. Huntley continues with the duties of general manager.

ROBERT F. HUNTLEY

The stockholders at their annual meeting earlier in the day re-elected Mr. Huntley, Mr. Cowles, C. C. Bassett and C. B. Lansing to the board of directors. David A. Gaskill was elected to succeed E. S. Bassett, who is retiring after serving over thirty years on the board.

Brillo Earnings Down

Brillo Manufacturing Co., Brooklyn, recently reported a profit before taxes in 1951 of $955,768, compared with $1,297,984 in 1950; federal and state taxes in 1951 were $518,601, in 1950 $647,878. The company earned $2.96 per common share in 1951, as against $4.35 in 1950.



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TRADE MARK

Make those drooping florals sit up and take notice! Sweet florals sing and sparkle when "Alpine Violet"* is used as a basic note . . . and it's not to be neglected as an important fixative for all floral perfumes. Soap compounds, too, are improved by "Alpine Violet," which is stable, alkali-resistant, non-irritating to skin.

Superior to Hydroxycitronellal . . . with an odor of real mountain cyclamen . . . "Alpine Violet" gives definite emphasis to such florals as Lily of the Valley, Japanese Lily, Wild Reseda, Honeysuckle, Lime Blossom . . . all floral bouquets. Unusually fragrant, almost a water-white liquid, "Alpine Violet" comes in four concentrations, all created to intensify floral effects.

**Du Pont's trade mark for its para isopropyl alpha methyl dihydro cinnamic aldehyde.*

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Dr. Emmerich Honored

The 1952 gold medal of the American Institute of Chemists was presented to Dr. Fred J. Emmerich, president, Allied Chemical & Dye Corp., New York, at a banquet held May 8, at the Hotel Commodore, New York. Lawrence H. Flett of National Aniline Division of Allied and president of the institute, announced that the award was made in recognition of Dr. Emmerich's achievements as a business leader devoted to building the chemical industry by fostering cooperation among men skilled in chemistry, engineering and commerce.

1951 Shampoo Sales Gain

Retail sales in 1951 of shampoos, dentifrices, shaving creams and other non-taxable toilet preparations showed a gain of about 9.9 percent over the 1950 figure. The normal rate of gain for shampoos is about three percent each year. In 1951 it amounted to over 8 percent, according to a recent estimate by the Toilet Goods Association, New York.

Aluminum for Tubes Freed

An amendment removing all restrictions on the use of aluminum for collapsible tubes, was announced last month by the containers and packaging division of National Production Authority. The remaining controls of Collapsible Tube Order M-27 are limited to tin specifications. M-27 was issued January 27, 1951, and controlled among other things the quantity of aluminum which a collapsible tube manufacturer was permitted to use. The recent action was recommended at an earlier meeting of the collapsible tube industry advisory committee and government representatives.

Solvay Executive to NPA

H. E. Hattersley, Solvay Sales Division, Allied Chemical & Dye Corp., New York, was recently appointed chief of the Alkali and Chlorine Section, inorganic branch, Chemical Division of the National Production Authority, Washington, D. C.

Mr. Hattersley has been active in the alkali and chlorine industry for thirty years, and at the time of his appointment he was manager of Solvay's Cincinnati office. While Mr. Hattersley is in Washington, William H. Floyd will be acting manager of the Cincinnati branch of Solvay.

H. E. HATTERSLEY

C. W. Cubberley Dead

Charles W. Cubberley, 60, of Roselle Park, N. J., an executive of Colgate-Palmolive-Peet Co., Jersey City, N. J., died recently in Kansas City, Kans., where he was visiting the company's plant. Mr. Cubberley had worked for Colgate for forty-six years, and at his death, was supervisor of warehouse and shipping in the Jersey City plant.

Hooker Sponsors Fellowship

Hooker Electrochemical Co., Niagara Falls, N. Y., is sponsoring a research fellowship in chemical engineering at the University of Washington, according to a recent announcement. While no specific assignment has been made, the research will be concerned with uses of caustic soda and chlorine as related to the use of waste products of the pulp industry such as lignin.

At the same time the company announced the following appointments to its technical staff: Wilma M. Vogt, as a chemist in the development and research department; Orville R. Hicks, as a draftsman in the engineering department; and Frank L. Echelberger, as a chemist in the works laboratory.

Shulton Names M. Rowland

Shulton, Inc., New York, recently announced appointment of Miss Maxine Rowland as advertising manager. Previously she was with Abbott Kimball Co., New York advertising agency and Neiman-Marcus, Dallas department store.

New Pennsalt Detergent

"Pensuds", a new synthetic detergent, designed for wet cleaning operations in the dry cleaning industry, was announced recently by Pennsylvania Salt Manufacturing Co., Philadelphia. The new detergent is compounded for heavy soil removal, but is safe to colors and fragile fabrics. It functions effectively in both hard and soft water and is free rinsing. "Pensuds" can be applied dry-to-the-wheel, or in solution, and can be used on the acid side for washing fugitive colors. It is being manufactured at the company's Wyandotte, Mich., plant and is packaged in powdered form in 50- and 100-pound drums.

Chlorophyll Patent Suit

Block Drug Co., Jersey City, recently introduced a new "Amm-i-dent" toothpaste, which, in addition to being ammoniated, also contains chlorophyll. Earlier Amm-i-dent, Inc. filed suit in Federal court against Rystan Co., Mount Vernon, N. Y., requesting that the latter's patent claims regarding therapeutic uses of chlorophyll in dental and oral care be declared invalid. Similar suits have been filed by Bristol-Myers Co., New York, and Colgate-Palmolive-Peet Co., Jersey City, N. J.

Reduces Sorbitol Prices

A price reduction for "Sorbo" (70% d-sorbitol solution) of one-half cent per pound in tank car quantities was announced recently by the industrial chemicals department of Atlas Powder Co., Wilmington, Del. Other grades of sorbitol and related polyols, such as sorbitol special (sorbitol and anhydrides solution) and "Arlex" (commercial sorbitol solution) have been reduced from one-quarter of a cent to one cent per pound at the same time.

Entering its 60th year as one of America's major chemical companies, Mathieson in 1952 will produce more basic chemicals and serve more vital industries than ever before in its history. From ammonia-soda process alkalies used by the early paper, glass, soap, petroleum and textile industries, Mathieson production has grown to include over 20 basic chemicals and their many specialized derivatives that today serve hundreds of manufacturers in this ever-expanding American economy.

Under current market conditions, a dependable source of supply is important. If your production requires any of these chemicals, you may be able to buy *to better advantage* by consulting with Mathieson now.

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Perfumers Hear Brenn

J. L. Brenn, president, Huntington Laboratories, Inc., Huntington, Ind., spoke on impressions gathered on a recent world tour at the May 12 luncheon meeting of the Chicago Perfumery, Soap and Extract Association held at the Conrad Hilton Hotel, Chicago.

Atlantic Refining Expands

Atlantic Refining Co., Philadelphia, recently announced the purchase of two warehouses in the midwest. One is located at 601-09 East Fifth Street, Cincinnati, the other at 217 Cherry Street, Toledo, O. As a further step in the expansion of its mid-western service Atlantic has augmented the Chicago office of its chemical product section.

Convention Proceedings

Proceedings of the twenty-fifth anniversary convention of the Association of American Soap & Glycerin Producers, held at the Waldorf-Astoria Hotel, New York in January, were issued recently. They are contained in a paper bound volume of 338 pages.

Grand Union Appoints Two

John H. Palmer was appointed last month by Grand Union Co., East Paterson, N. J., as head buyer of non-food items, and Edward J. Moberg, Jr., was named non-food sales manager. Mr. Palmer was sales promotion manager of Grand Union's route division, the company's home delivery service. Prior to that he had been housewares and premium buyer for the route division since 1947. Mr. Moberg joined Grand Union in 1933 as a clerk and rose to the position of store manager and then to district sales manager.

Shell Advances Huldrum

G. W. Huldrum, Jr., was recently appointed sales manager of the Western Division of Shell Chemical Corp., New York. Mr. Huldrum began his career as a chemist at Shell Chemical's Pittsburgh, Calif., plant in 1939 after completion of studies at the University of California. He progressed through various manufacturing and marketing assignments in California, Texas and New York and in 1947 was appointed district manager of the

G. W. HULDRUM

Detroit sales office. Two years later he returned to San Francisco as manager of agricultural products, western division, and in 1951 became assistant sales manager, Western Division.

Monsanto in Minneapolis

The opening of a Twin Cities sales office for the Minneapolis-St. Paul territory in the Foshay Tower Building, Minneapolis was announced recently by Monsanto Chemical Co., St. Louis. Arthur A. Hibbeler, assistant branch manager for Monsanto's organic chemicals division, is in charge of the new office, a branch of the company's Chicago district office. Francis E. Woodill is assistant branch manager for the company's plastics division.

Chi. Trade Fair Dates

The Chicago International Trade Fair has postponed the opening of its 1952 exposition on Chicago's Navy Pier from March 22 to Aug. 6. This was made necessary, according to I. S. Anhoff, president of the Fair, because of a delay in the U. S. Senate's action on a joint resolution, earlier approved by the House, officially inviting nations of the world to participate. The deferred opening will thus give exhibitors more time to prepare their displays. At the 1950 show products from 44 nations were exhibited and attendance was estimated to be 250,000.

Soap Restricted in Egypt

The Egyptian government recently issued a decree regulating the manufacture and sale of soap in Egypt. Under it soap may not be made, imported, sold, offered for sale, placed on sale, or held with the intent of sale, unless it falls into certain categories provided by the decree.

P & G Sets Safety Record

A new world's record for safe operation in the soap industry was established recently by the 600 employees of the Chicago factory of Procter & Gamble Co., Cincinnati. Since May 19, 1949 the employees of the factory worked 3,644,900 man hours without an accident which involved the loss of time. The previous record was established in June, 1944.

For more than seventy-five years Procter & Gamble has emphasized safe operation in all of its plants, and through safety engineering and education has achieved an outstanding safety record. The company has recently been given five awards by the National Safety Council for safety accomplishments in five of its factories.

New Lever Cleveland Office

Lever Brothers Co., New York, recently opened a division office in Cleveland. Gordon J. La-Fleur, formerly of Milwaukee, was named manager of the division, and Noble E. Pope was advanced from salesman to area manager for Cleveland. J. Lawrence Dampier, Lever vice-president, pointed out at the opening that the company felt that business in this area had developed to the point where it should be handled locally. Previously Cleveland had been covered from the Pittsburgh office.

Safety Equipment Cleaner

A new cleaner-sanitizer for use on personal safety equipment was announced recently by Mine Safety Appliance Co., Pittsburgh, Pa. "MSA Cleaner-Sanitizer" is sold in dry powder form, packed in 25 one-ounce envelopes to the carton. An ounce of the powder is added to a gallon of luke warm water. Equipment is cleaned, rinsed and allowed to air-dry.

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Council Names Morgens

Howard Morgens, vice-president in charge of advertising, Procter & Gamble Co., Cincinnati, was recently elected chairman of the board of directors of the Advertising Council. He succeeds Fairfax M. Cone, president, Foote, Cone & Belding, New York, who assumes chairmanship of the planning committee of the council's board. Mr. Morgens has been a council director for four years; and two years ago he headed the radio and television committee.

Japanese Soap Output

In 1951 147,000 metric tons of soap were produced in Japan. Approximately 36,258 tons of fine soap and 90,269 tons of washing soap are included in this total. This figure represents a 50 per cent increase over 1950, when the total was 96,000 tons. The peak of Japanese soap production (263,712 tons), was reached in 1939. Since then the figure fell steadily until 1947 when it amounted to only 7,981 tons. A drop to 120,000 tons is being anticipated for the current year because of a tallow shortage and drop in domestic demand.

Helie Berg Sales Head

Appointment of Percy Helie as general sales manager was announced recently by Charles W. Berg Laboratories, Philadelphia. Mr. Helie, a graduate of Lowell Textile Institute, has been with Berg for 13 years.

New Methocel Distributors

Agreement with seven distributing firms in the U. S. to handle sales of its "Methocel" methylcellulose was announced late last month by Dow Chemical Co. Production facilities for "Methocel" were increased recently.

Braun-Knecht-Heiman of San Francisco, Braun Corp. of Los Angeles and Van Waters & Rogers Co., with offices in Portland, Seattle and Spokane are handling "Methocel" on the west coast; Innis, Speiden & Co. are distributing the product in Chicago, where Merchants Chemical Co. is a distributor, as well as in Cincinnati and Milwaukee. G. S. Robins is handling "Methocel" in St. Louis. Eastern distribution is by Innis Speiden in New York City and Gloversville, N. Y.; and by J. J. Leidy & Co. of Baltimore. George Mann & Co. of Providence, an established distributor of the chemical product is continuing to handle the product.

Stearic Acid Plant Razed

Fire and explosion recently razed the Philadelphia stearic acid plant of Hardesty & Co., New York, causing an estimated damage of $250,000. The fire, while destroying the stearic acid department, left other fatty acid units unscathed.

Babbitt Profit Drops

For 1951 B. T. Babbitt Inc., New York, and subsidiaries recently reported a net profit of $768,571, or 75 cents a share on net sales of $16,550,306. This compares with $902,498 or 88 cents on sales of $15,186,504 in 1950.

Chicago Drug & Chem. Party

The Annual Spring Party of the Chicago Drug and Chemical Association is to be held May 17, in the grand ballroom of the Palmer House.

S. & S. Soap Co. Moves

S. & S. Soap Co. moved recently to a new plant located at what was formerly the Port Morris station of the New York, New Haven and Hartford Railroad at 815 East 135th St., Bronx, New York. The company's new plant provides nearly 40,000 square feet of floor space, has a five car railroad siding, and loading platforms for eight trucks.

Israeli Soap Prices Up

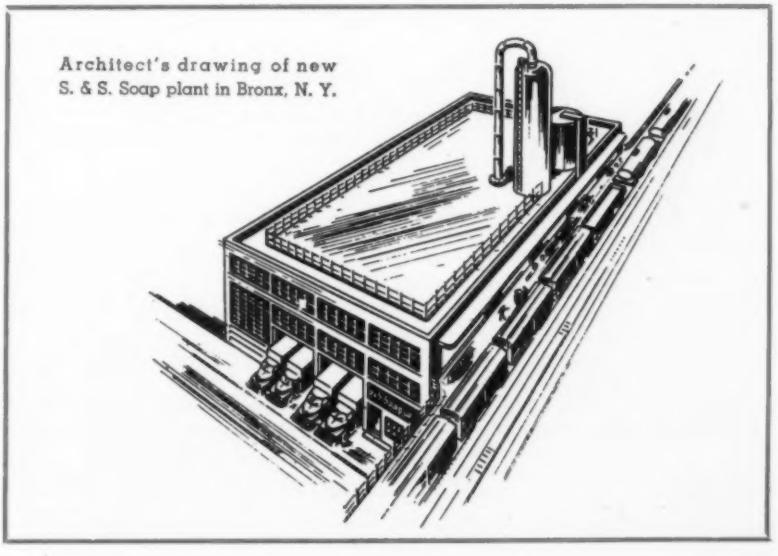
A 100-gram bar of soap now costs 95 pruta in Israel, a rise of 25 pruta, it was announced recently.

Glyco Buys New Plant

An additional plant at Williamsport, Pa., was recently purchased by Glyco Products Co., Brooklyn, N. Y. to provide for expansion primarily for civilian markets. Glyco's Natrium, W. Va., plant, according to the company, is carrying an increasing load of defense materials orders. Engineering and construction contracts have been signed with the H. K. Ferguson Co., Pittsburgh and manufacture of some products is expected to start about August 1, with full production later in the year.

Abandons Sodium Project

National Distillers Products Corp., New York, recently announced it has abandoned further work on its projected eight million dollar plant in Ashtabula, O., for the production of sodium for Procter & Gamble Co., Cincinnati. P. & G. planned to use the sodium in producing heavy duty detergents but is understood to have changed its formula. Under the terms of its contract with P. & G., National Distillers has been reimbursed for funds spent amounting to around four million dollars, and will incur no loss.



Architect's drawing of new S. & S. Soap plant in Bronx, N. Y.

A New Addition To The Family

As one of the largest producers of Sulfuric Acid for well over a quarter of a century, naturally our initial interest in organic chemicals is centered around ORGANIC SULFONIC ACIDS and their derivatives. Intensive research has developed a new approach to this basic reaction and a new plant employing a revolutionary Sulfonation process is under construction.

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New Liquid Detergents

Commercial production is under way on three new synthetic liquid dishwashing detergents at the Stepan Chemical Co., Chicago, it was announced recently. The new products, designated as "LD-100," "LD-200," and "LD-300," are fully compounded concentrates, 60 per cent solids, and are available ready for bottling after perfuming and dilution.

Among the properties of these new liquid detergents, according to the manufacturer, are high-flash foam, unusual foam stability in the presence of free grease, and good detergency combined with excellent grease emulsification. The three grades available are designed to meet the varying requirements of manufacturers. The basic ingredients are fatty alcohol sulphates, alkyl aryl sulfonates, non-ionics, and foam stabilizers.

While primarily intended for household use, the new detergents will also be of interest to manufacturers of liquid cleaning compounds for blending with other detergents to give higher flash foam and greater foam stability in the presence of free grease to the finished formula. All three items are available in drums, tank trucks and tank cars. Samples of these new liquid detergents may be obtained by writing to the manufacturer, Stepan Chemical Co., 3250 So. Kedzie Ave., Chicago 23, Ill.

Logcher to Mexico and Cuba

Dr. Henri F. Logcher, export manager of Magnus, Mabee and Reynard, Inc., New York, is on a four weeks' tour of Mexico and Cuba. In Cuba Dr. Logcher is visiting MM&R's recently appointed sales representatives General Distributors, Inc. In June Dr. Logcher will start on a European trip which will cover all of Western Europe.

Keel Shell Advtg. Mgr.

M. H. Keel was recently appointed manager of the newly formed advertising department of Shell Chemical Corp., New York. Born in Lethbridge, Alberta, Canada, and a graduate of the University of Alberta (B.Sc.) and of the University of Michigan (M.S.), Mr. Keel joined the advertising staff of Shell Chemical Corp. in 1948. He brings to his new position six years of research and operating experience in the chemical and petroleum fields and six years of advertising and publicity.

M. H. KEEL

Holland Retires from C-P-P

George I. Holland, since 1927 district sales manager in Kansas City for Colgate-Palmolive-Peet Co., Jersey City, N. J., retired recently after 32 years with the company. Mr. Holland was employed as a retail salesman in Joplin, Mo., for the old Peet Brothers Co. in March, 1920. After the company merger in 1927 with the Colgate-Palmolive interests, he was made sales supervisor in Kansas City, and later became district sales manager. Mr. Holland is 61 years old. Succeeding him is George W. Wilson who for the past four years has been merchandising manager for the firm in Jersey City.

Antara Sales Changes

Antara Chemicals Division of General Dyestuff Corp., New York, has realigned the staffs of its sales and technical departments, it was announced recently. Responsibilities have been allotted by markets rather than by products. Appointed under the new arrangement are: Dr. P. M. Kirk, assistant manager in charge of direct sales; T. R. Moore, assistant sales manager in charge of product line and sales service, and J. M. Cloney, market manager for industrial chemicals.

Lift Fats, Oils Ceilings

Suspension of price controls on crude cottonseed oil, crue soybean oil, tallow, lard, grease and vegetable oil soapstocks, effective April 28, was announced recently by Office of Price Stabilization, in amendment 13 to CPR 6.

The new amendment revises downward the ceiling for the crude vegetable oils as follows: soybean oil, 16½ cents per pound, f.o.b. Decatur; cottonseed oil, 18 cents per pound (Valley basis), and corn oil, 19 cents per pound, f.o.b. U. S. mills. A basic price of 17 cents a pound is established for loose lard in Chicago. These new ceilings are 60 to 75 per cent above the current market quotations.

The amendment provides for suspension of all provisions of CPR 6 and other regulations insofar as they apply to commodities for which new ceiling prices are fixed by this amendment, and also for suspension of the provisions of CPR 6 applying to tallows and greases, animal fat waste materials, and vegetable oil soapstocks.

The director of price stabilization will rescind this suspension in whole or in part if quotations of actual transactions in established spot or future markets reach the following price levels: crude cottonseed oil, 15½ cents per pound, Valley basis; crude soybean oil, 14 cents per pound, f.o.b. Decatur; crude corn oil, 16½ per pound, f.o.b. U. S. mills; fancy tallow, 9 cents per pound, New York, and loose lard, 14½ cents, Chicago. This means that suspension of ceilings would be rescinded when the current quotations on the named crude oils and lard are 2½ cents and on tallow 1½ cents below their respective ceiling prices.

P&G Profits Decline

Procter & Gamble Co., Cincinnati, and its subsidiaries recently reported a net profit of $33,510,412 after all charges, equal to $3.47 a common share, for the nine months ended last March. Net profit was $44,710,855 or $4.64 a share a year ago. Provision for taxes amounted to $38,831,000 for the latest period.

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TGA Meeting May 12-14

New officers for the coming year are to be elected at the 17th annual convention of the Toilet Goods Association being held at the Waldorf Astoria Hotel, New York, May 12, 13 and 14. The association's scientific section meets May 14, final day of the meeting. Industry problems are to be discussed in open session presided over by S. L. Mayham, executive vice-president. The Charles S. Welch Memorial Packaging Awards are to be presented at the luncheon, May 12. Papers dealing with the effects of shampoos, surface active agents, etc., on the eye are scheduled for discussion during the scientific section's meeting.

Expand Glycerine Output

An expansion goal for glycerine — natural and synthetic — which would bring the annual production capacity of the industry to 278 million pounds by January 1, 1955, an increase of 53 million pounds over 1951 capacity, was announced early in May by Ralph S. Trigg, Deputy Administrator of the Defense Production Administration for Program and Requirements. DPA said the capacity to produce "natural" glycerine is already greater than this goal but explained that natural glycerine production is limited to less than this amount by the quantity of available raw materials. As a result, attainment of the goal will depend mainly on an expansion of synthetic glycerine capacity.

Oil Chemists Elect James

E. M. James, technical adviser to the board of Lever Brothers Co., New York, was elected president for 1952-53 at the American Oil Chemists' Society's 43rd annual meeting held at the Shamrock Hotel, Houston, Tex., April 28-30. Procter Thomson, associate director in charge of process standards, chemical division of Procter & Gamble Co., Cincinnati, was named vice-president; T. H. Hopper, head of the analytical and physical division, Southern Regional Research Laboratory, New Orleans, La., secretary; and J. J. Vollertsen, retired chief of chemical research development for Armour Co., Chicago, treasurer.

Also elected were three members at large: A. R. Baldwin, chemist with Corn Products Refining Co., Argo, Ill.; W. A. Peterson, head of the standardization and quality control division, Colgate-Palmolive-Peet Co., Jersey City; and N. A. Ruston, director of development and service for Emery Industries Inc., Cincinnati.

E. M. JAMES

Serving with these newly elected seven officers will be four past presidents, forming a governing board of eleven: A. E. Bailey, HumKo Co., Memphis, Tenn. (1951); J. R. Mays Jr., Barrow-Agee Laboratories, Inc., Memphis, Tenn. (1950); V. C. Mehlenbacher, Swift & Co., Chicago (1949); and C. P. Long, Procter & Gamble Co., Cincinnati (1948). Retiring past president is R. T. Milner, Northern Regional Research Laboratory, Peoria, Ill.

Frank Hagerman Dead

Frank Hagerman, 94, died recently at his home in Hartland, N. B. He had been a manufacturer of soaps and cleaners for about 40 years. In the promotion of his products he made use of poetry of his own composition. Some of his poems he had compiled in a book which was distributed along with his products to dealers and their customers. Surviving is his daughter, Mrs. John MacCallum of Hartland, with whom he lived.

C-P-P First Quarter Lower

For the first quarter of 1952 Colgate-Palmolive-Peet Co., Jersey City, recently reported a net income amounting to $2,250,000 or 97 cents per share of common stock on the 2,201,929 shares outstanding. This compares with $4,378,000 or $2.04 per share earned in the first quarter of 1951 on the 2,097,098 shares then outstanding.

Domestic sales in the 1952 quarter amounted to $63,402,000, as against $72,725,000 in the first quarter of 1951. This decrease according to the report reflects lower average selling prices and a decline in volume from the unusually high level of business in the 1951 quarter. World-wide sales including sales of foreign subsidiaries which are not consolidated, totaled, $94,664,000 in the first quarter of 1952 and $105,024,000 in the '51 first quarter.

E. H. Little, president, told stockholders at the annual meeting that the outlook is improving, that the company estimated that at the end of the first half of this year it will have more sales than in the first half of 1951, and more profits. Little if any inventory write downs are expected this year.

Mr. Little said he expected profits in the last half of 1952 to be better than in 1951. Dealers inventories, he said, are lower.

Colgate has been spending large sums on advertising its synthetic detergents and this should be reflected in better sales and earnings, he stated. The company has recently completed a heavy duty detergent plant in Jersey City and will soon have another operating in Kansas City. Colgate expects to spend about $12 million on plant expansion this year and will ask the board of directors for authorization to spend another eight to $10 million.

The company is now selling a chlorophyll tooth paste and plans to start advertising on a nationwide basis soon. Competition in this field is terrific, according to Mr. Little, and it costs five to six million dollars to put over a new tooth paste. The firm is now spending $4 million annually on research, he stated.

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HOOKER SULFIDES

SODIUM SULFIDE

Formula: Na_2S

Appearance: Light, buff colored solid in flake form

TYPICAL PROPERTIES

Molecular Weight	78.1
Melting Point	100° C
Na_2S	60-62%
Water of Crystallization	35% min.
NaCl	1.5% max.
Other Na Salts	2.0% max.
Fe	8 ppm max.
Other Heavy Metals	1 ppm max.

USES

Dehairing Agent: Hides
Desulfurizing Agent: Viscose rayon
Intermediate: Chemicals, dyestuff intermediates
Metal Processing: Ore flotation, metal refining
Other Uses: Manufacturing paper pulp, rubber; textile processing.

SODIUM SULFHYDRATE

Synonym: Sodium Hydrosulfide
Formula: NaSH
Appearance: Light lemon colored solid in flake form

TYPICAL PROPERTIES

Molecular Weight	56.1
Melting Point	55° C
NaHS	70 to 72%
Water of Crystallization	26% min.
Na_2S	2.5% max.
Other Na Salts	1.2% max.
Fe	5 ppm max.
Other Heavy Metals	1 ppm max.

USES

Dehairing Agent: Hides
Desulfurizing Agent: Viscose rayon
Intermediates: Dyestuffs; organic chemicals such as thioamides, thiourea, thioglycolic acid, thio- and dithiobenzoic acids, sodium thiosulfate.

SODIUM TETRASULFIDE SOLUTION

Formula: Na_2S_4
Appearance: Clear, dark red aqueous solution

TYPICAL PROPERTIES

Molecular Weight	174.2
Freezing Range	3.5° to −17° C
Distillation Range	115° to 120° C
Specific Gravity, 15.5°/15.5° C	1.335
Na_2S_4	40%
Sulfur	30%

USES

Soaking Agent: Hides and skins prior to unhairing
Reducing Agent: For organic nitro bodies
Reagent: Ore flotation
Intermediate: Sulfur dyes

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Cosmetic Chemists Meet

The semi-annual one-day meeting and luncheon of the Society of Cosmetic Chemists is being held in the Hotel Biltmore, New York City, May 15. Among the highlights of the program are papers by Carl Pacifico, Wyandotte Chemicals Corp., Wyandotte, Mich., on new polyoxyalkalene nonionics for cosmetics and another by W. E. Botwright, Rohm & Haas Co., Philadelphia, on the use of quaternary ammonium compounds in cosmetics.

Among other scheduled speakers are Alex Meshbane, Tracerlab, Inc., on tracer chemistry, Dr. G. F. Reddish, Lambert Pharmacal Co., on the etiology of infectious dandruff, and Dr. Peter Flesch, University of Pennsylvania, on experimental loss of hair.

Reinitz Becomes Duveen

Duveen Soap Corp. is the new name of the former Reinitz Soap Corp., Long Island City. The company specializes in private label soaps.

Eastman Has New Aromatic

Tennessee Eastman Co., Kingsport, Tenn., has prepared a technical data sheet on their new perfume aromatic, compound 77-B. Physical properties, fields of application, life expectancy and general comparisons between compound 77-B and similar aromatics are given. Copies of the sheet are available on request.

Oil Chemists Hear Smith

Fred Smith, Sharples Corp., Philadelphia, spoke on the use of the centrifuge in vegetable oil refining at the bi-monthly meeting of Northeast Oil Chemists Society at the Military Park Hotel, Newark, N. J., April 17. Dinner preceded the meeting which was conducted by William Peterson, Colgate-Palmolive-Peet Co., president. K. E. Johnson, Armour & Co., explained the set-up for the short course of the AOCS at Rutgers University this summer.

The nominating committee announced its slate of officers which includes: H. W. Ladyn, Armour & Co., for president; G. A. O'Hare, Congoleum-Nairn Co., for vice president; E. A. Sigworth, West Virginia Pulp & Paper Co., for secretary; and John A. Preston, E. F. Drew, Inc., for treasurer. To fill vacancies in the governing council the following were named to serve: J. W. Bodman, Lever Brothers Co.; C. H. Haurand, Best Foods, Inc.; and R. C. Hussong, Spencer-Kellogg & Sons, Inc.

SAACI Golfs June 17

The Salesmen's Association of the American Chemical Industry, recently announced that its first golf outing of the season will be Tuesday, June 17, at Bonnie Briar Country Club, Larchmont, N. Y.

DCAT to Hear Lodge

The Honorable John Lodge, Governor of Connecticut, will address the spring luncheon meeting of Drug, Chemical and Allied Trades Section of the New York Board of Trade to be held Wednesday, June 11, at the Hotel Astor, New York.

DCAT's 27th annual dinner is scheduled for March 5, 1953, at the Waldorf-Astoria Hotel, New York, according to a recent announcement by Charles M. Macauley, chairman.

France Honors de Laire

Francois de Laire, director general of Fabriques de Laire, Paris, France, was recently made a "Chevalier de la Legion d'Honneur" in recognition of his distinguished services to industry. Fabriques de Laire operates in the U. S. as the deLaire Division of Dodge & Olcott, Inc, New York.

Sell Attapulgus Interest

F. Eberstadt & Co. and Lazard Freres & Co., both of New York, have purchased the half interest in Attapulgus Clay Co., Philadelphia, formerly held by Standard Oil Co. (N.J.), according to a recent announcement. The remaining 50 per cent interest in the clay company is owned by Atlantic Refining Co. Ferdinand Eberstadt and David E. Lillienthal have been elected directors of Attapulgus and of Filtrol Corp., Los Angeles, which is jointly owned by Attapulgus Clay and Filtrol Co. of California, a holding company.

New Plant for Stepan

Stepan Chemical Co., Chicago, recently announced completion of a new 37,000 square feet plant at 3250 S. Kedzie Ave. The building is to house the firm's reseach, application, and control laboratories, and the general and sales offices. The company is said to be planning a series of new structures on the 10-acre tract on which the new building is located.

P&G, Lever Cut Soap Prices

Procter & Gamble Co., Cincinnati, recently announced a reduction in wholesale prices on its principal household soap brands by about four per cent. Its synthetic household detergents are unchanged.

Lever Brothers Co., New York, reduced the price of "Swan" soap four per cent, "Lux" and "Lifebuoy" soaps 2½ per cent, and "Rinso," "Lux" flakes and "Silver Dust" soap powders four per cent.

Glycerin Export Quota Set

Second-quarter export quota for crude and refined glycerin (100 per cent glycerol basis, schedule B No. 831450) is 800,000 pounds, the Office of International Trade announced recently. The same quantity has been available for export in the past two quarters.

Remove Inventory Controls

Removal of inventory control from 25 chemicals recently announced by the National Production Authority (amendment to NPA regulation No. 1) includes methyl chloride, carbon tetrachloride, and glycerin.

New Polak Aromatic

"Phantolid," a new synthetic Tonkin-musc aromatic, was recently announced by Polak's Frutal Works, Inc., Middletown, N. Y. It is said to be readily soluble in most solvents and stable in the presence of acids and alkalis. The manufacturer claims that it does not color or discolor soap or cosmetics, and that it is non-irritating to skin, according to all tests made so far.

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NEW Trade Marks

THE following trade marks were published in recent issues of the *Official Gazette* of the U. S. Patent Office in compliance with section 12(a) of the Trade Mark Act of 1946. Notice of opposition under section 13 may be filed within 30 days of publication in the *Gazette*. See rules 20.1 to 20.5. As provided by section 31 of the Act, a fee of $25 must accompany each notice of opposition.

Bone-Dry — This for shoe grease and shoe dressing. Filed January 18, 1951, by Bone Dry Shoe Manufacturing Co., Tacoma, Wash. Claims use since 1918.

Feather Touch—This for insect killer, moth proofing preparation, air refresher, etc. Filed February 8, 1951 by Bostwick Laboratories, Inc., Bridgeport, Conn. Claims use since November 21, 1949.

Alkanol — This for surface active agents which by reducing surface tension promote wetting re-wetting, penetration, dispersion, emulsification, foaming, or detergency. Filed May 31, 1951 by E. I. du Pont de Nemours & Co., Wilmington, Del. Claims use since August 21, 1930.

Ipana — This for toothpaste. Filed act of 1905, January 15, 1948, amended to application under act of 1946, principal register, August 3, 1948, by Bristol-Myers Co., New York. Claims use since May 31, 1946.

Pex—This for liquid soap for personal use. Filed January 25, 1950 by Neenah Lapey doing business as Pex Products Co., Hamburg, N. Y. Claims use since October 1916.

Covoil — This for tall oil. Filed June 14, 1950 by West Virginia Pulp and Paper Co., New York. Claims use since May 2, 1950.

Mirrex—This for automobile polish containing silicone. Filed July 11, 1950 by Liquid Glass Corp., New York. Claims use since April 15, 1950.

Danbury—This for polishing waxes for floors, walls, tables, and shelf coverings. Filed November 7, 1950 by the Danbury Rubber Co., Danbury, Conn. Claims use since spring 1928.

Seven-Ite—This for polish for automobiles, furniture floors, etc. Filed June 14, 1951 by E. I. du Pont de Nemours & Co., Wilmington, Del. Claims use since May 4, 1951.

Sani-Aire—This for refrigerator deodorant in block form. Filed December 3, 1949 by Mason Products Co., Cincinnati. Claims use since September 1, 1949.

Repel-a-Rat—This for rat repellent. Filed June 10, 1950 by Seaver Co., Omaha, Nebr. Claims use since May 19, 1950.

Airily—This for deodorant and air freshener. Filed September 6, 1950 by Janalyn Laboratories, Inc., Worcester, Mass. Claims use since January 15, 1950.

Atomic Dust—This for ant and roach powder. Filed April 18, 1951 by C & W Insecticide Co., Monroe, La. Claims use since April 12, 1951.

Verve—This for preparation for increasing penetration and detergency action in wet-cleaning and laundering. Filed July 2, 1951 by Patek & Co., San Francisco. Claims use since May 11, 1950.

C.R.I.—This for rust-inhibiting germicide. Filed July 21, 1951 by C. R. I. Corp., New York. Claims use since May 10, 1951.

Amo-Gene — This for dentifrices. Filed February 9, 1950 by Amo-Gene, Chicago, Ill. Claims use since December 5, 1950.

General Formula No. 209 — This for compound for removing stains from textile fabrics. Filed July 12, 1947 by R. R. Street & Co., Chicago, Ill. Claims use since October 1, 1935.

Penn Salt — This for laundry detergents; for strongly alkaline detergents used as soap builders, drycleaning soaps, spotting compounds, drycleaning solvents; for cleansers for cleaning utensils, equipment, floors and walls in dairies. Filed June 23, 1948 by Pennsylvania Salt Manufacturing Co., Philadelphia, Pa. Claims use since October 11, 1946.

Snow Creme—This for shampoo. Filed June 10, 1950 by Revlon Products Corp., New York. Claims use since May 17, 1950.

Spec-Tak — This for bottle washing compound. Filed September 13, 1950 by Diversey Corp., Chicago, Ill. Claims use since October 4, 1940.

Danbury—This for cleaning material for removing wax and dirt from painted, enamelled or varnished surfaces, and particularly from rubber surfaces such as rubber floor tile. Filed October 23, 1950 by the Danbury Rubber Co., Danbury, Conn. Claims use since spring of 1928.

Zenith — This for detergent for use in mechanical and electrical dishwashing machines. Filed December 12, 1950 by Church & Dwight Co., New York. Claims use since December 7, 1950.

Roloc—This for combination dye and cleaner for the purpose of rejuvenation of all fabrics. Filed February 13, 1951 by Advance Colors, Inc., St. Petersburg, Fla. Claims use since January 19, 1951.

Fitch—This for shampoo for the hair. Filed June 18, 1951 by Grove Laboratories, Inc., St. Louis, Mo. Claims use since 1893.

Isco — This for insecticidal aerosols. Filed July 18, 1950 by Innis, Speiden & Co., New York. Claims use since 1911.

Lustretile — This for powder compound for cleaning and polishing tile, porcelain, and enamelware. Filed May 17, 1951 by Pittsburgh Chemical Laboratory, Pittsburgh, Pa. Claims use since December 17, 1945.

Metalure—This for metal polish. Filed February 25, 1950 by Rustaway Corp., New York. Claims use since August 3, 1949.

Glomite — This for preparations which clean and polish automobiles. Filed June 8, 1950 by American Grease Stick Co., Muskegon, Mich. Claims use since May 17, 1950.

Black Panther—This for wax for polishing floors, furniture, woodwork and linoleum. Filed June 26, 1951 by Black Panther Tool Co., Philadelphia. Claims use since June 14, 1951.

Polar Wet—This for wetting agent used in conjunction with soap for laundering. Filed June 2, 1950 by Suds-All Co., Evanston, Ill. Claims use since March 1, 1950.

Dentabs—This for dentifrice in tablet form. Filed May 31, 1951 by Luyties Pharmacal Co., St. Louis, Mo. Claims use since October 2, 1928.

Hygee—This for alkaline type detergent used for dishes, cooking and eating utensils, food product equipment. Filed March 26, 1949 by Finger Lakes Chemical Co., Ithaca, N. Y. Claims use since May 1948.

Speed-X — This for liquid cleaner for floors and white wall tires. Filed April 19, 1949 by L. M. Brownsey Supply Co., Chicago. Claims use since November 1938.

Atalco — This for detergents containing anionic or cationic or nonionic substances for general use in the industrial art. Filed May 17, 1949 by American Alcolac Corp., New York. Claims use since May 16, 1949.

Packer's Charm Soap — This for soap. Filed November 19, 1949 by Packers Tar Soap, Inc., Mystic, Conn. Claims use since November 15, 1949.

Pur-O-San — This for dry cleaning soap. Filed April 14, 1950 by Huntington Laboratories, Inc., Huntington, Ind. Claims use since November 5, 1934.

Thesco Organic Cleaner—This for cleaning powder for toilet bowls. Filed February 13, 1951 by the Gerson-Stewart Corp., Cleveland, O. Claims use since January 1918.

Germidyne—This for antiseptic hand cleanser in powder form. Filed March 2, 1951 by West Disinfecting Co., Long Island City, N. Y. Claims use since December 7, 1950.

Exidan—This for shampoos. Filed March 19, 1951 by Quality Chemists, Inc., St. Louis, Mo. Claims use since July 21, 1949.

Hood C-20—This for powdered soap. Filed March 22, 1951 by Mt. Hood Soap Co., Portland, Ore. Claims use since April 8, 1949.

Durax — This for liquid wax for cleaning and polishing finished surfaces of automobiles, furniture, etc. Filed February 17, 1950 by Continental Chemical Corp., Washington,

(*Turn to Page* 123)

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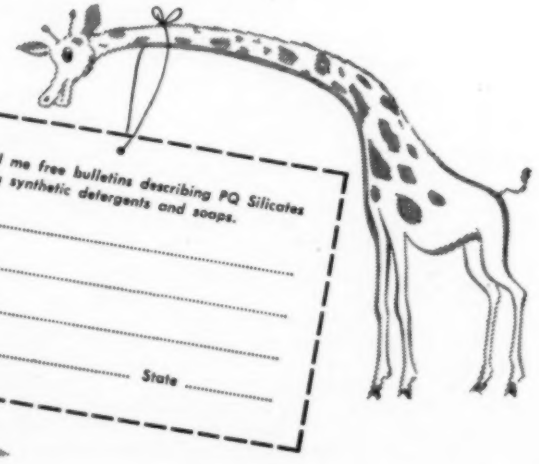

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Bids and AWARDS

Navy Floor Wax Award

In a recent opening for miscellaneous supplies by the Aviation Supply Office, Navy Department, Philadelphia, Trio Chemical Works, Brooklyn, N. Y., received the award on 106,000 gallons of floor wax with a bid of $68,784.

FSS Floor Wax Bids

Low bids on 21,615 gallons (item 1) and 2,370 five-gallon cans (item 2) of floor wax for a, Washington, D. C.; d, Denver; cl, Cleveland; k, Kansas City, Mo.; l, Los Angeles; s, Seattle, in a recent opening for miscellaneous supplies by Federal Supply Service, New York, were submitted by R. M. Hollingshead Corp., Camden, N. J., on item 2, destination cl, 86.5 cents; d, 97.9 cents; k, 92.3 cents; s, 98.9 cents; on item 1 by Trio Chemical Works, Brooklyn, N. Y., destination cl, 67 cents; k, 76 cents; l and s, 82.3 cents; a, 63 cents.

AQMC Soap Awards

In a recent opening for miscellaneous supplies by the Army Quartermaster, New York, the following received awards: Fels & Co., Philadelphia, with a low bid of $44, 780 for 1,000,020 bars of soap; Colgate-Palmolive-Peet Co., Jersey City, N. J., with a bid of $63,269 for 1,207,40 bars of soap.

FSS Laundry Soap Bid

Low bidder in a recent opening for miscellaneous supplies by Federal Supply Service, New York, was National Milling & Chemical Co., Philadelphia, with a bid of 7.32 cents on 17,480 pounds of laundry soap.

Low Disinfectant Bids

In a recent opening for miscellaneous supplies by New York Navy Purchasing Office, New York, the following were low bidders on 5,060 gallons of disinfectants, germicides, and fungicides, destination a, Philadelphia; b, Norfolk; c, Yukon; d, San Diego; e, Oakland: Fine Organics, Inc., New York, b, $3.195; d, $3.53; e, $3.52; and Gallowhur Chemical Corp., Ossining, N. Y., a, $3.16; c, $3.34.

Aerosol Insecticide Bid

In a recent opening for miscellaneous supplies by New York Navy Purchasing Office, New York, Fluid Chemical Co., Newark, N. J., was low bidder on 2,529,000 DDT and allethrin aerosol insecticide units for destinations a, Troy; b, Atlanta; c, Schenectady with bids of a, 53.37 cents; b 52.257 cents; and c, 51.225 cents.

Liquid Surgical Soap Bids

Low bids on 23,184 one-pint bottles of surgical liquid soap for a, Edgewater; b, Oakland; c, Mechanicsburg; d, Clearfield; in a recent opening for miscellaneous supplies by The Armed Services Medical Procurement Agency, Brooklyn, N. Y., were submitted by the following: Puritan Co., Rochester, N. Y., a and c, 26 cents; Retort Pharmacal Co., Long Island City, N. Y., b, 29.6 cents; Lightfoot Schultz Co., New York, d, 27.9 cents.

Low Soft Soap Bids

In a recent opening for miscellaneous supplies by the Armed Services Medical Procurement Agency, Brooklyn, N. Y., the following submitted low bids on 10,188 25-pound drums of soft soap, destination a, Atlanta; b, Schenectady; c, St. Louis; d, Alameda; e, Edgewater; f, Oakland: Harley Soap Co., Philadelphia, $2.19, f.o.b. origin, destination e, $2.29; National Chemical Laboratories of Pa., Philadelphia, $2.18 f.o.b. origin, destination e, $2.33.

Navy Toilet Soap Bids

Low bids on 95,000 pounds floating toilet soap for a, Portsmouth, N. H.; b, Bayonne; c, Norfolk; d, Portsmouth, Va.; e, Seattle; in a recent opening for miscellaneous supplies by the New York Navy Purchasing Office, New York, were submitted by Young's Chemical Manufacturing Co., Philadelphia, on destination a, 8.3 cents; b, 8.2 cents; c, 8.3 cents; d, 8.3 cents; e, 10.2 cents; f.o.b. Philadelphia, 7.9 cents.

J. J. Regan Joins Drew

The chemical specialties division of E. F. Drew & Co., New York, recently announced the appointment of James J. Regan as district manager of the metropolitan New York laundry section. Mr. Regan is giving special emphasis to conducting meetings of route salesmen. He was formerly with Beach Soap Co., Lawrence, Mass., and Colgate-Palmolive-Peet Co., Jersey City, N. J., where he specialized in training route salesmen in methods of increasing sales through promotion of laundry services.

AOCS Course Speakers

The names of four speakers for the 1952 short course on soap and detergents, to be given by the American Oil Chemists' Society at Rutgers University, New Brunswick, July 6-11, were announced recently. The four, all for the session July 8: John W. Bodman, technical advisor to the board, Lever Brothers Co., New York, on "Soap Finishing;" John W. McCutcheon, consulting chemist, New York, on "Soap by Saponification;" W. A. Peterson, head, standardization and quality control division, Colgate-Palmolive-Peet Co., Jersey City, on "Glycerine Production and Refining;" Martin D. Reinich, also of Colgate, on "Soap from Fatty Acids."

Names of other speakers will be released soon by other chairmen of the day: Arthur L. Fox, Colgate, for July 7; A. S. Richardson, Procter & Gamble, Cincinnati, for July 9; Mr. Bodman for July 10; Francis Scofield, National Paint, Varnish & Lacquer Association, Washington, for July 11. J. L. Hale of Swift & Co., will preside July 8. Foster Dee Snell, New York, is short course chairman. Also assisting with arrangements is the incoming president of the society, E. M. James, assistant to the technical adviser to the board for Lever Brothers.

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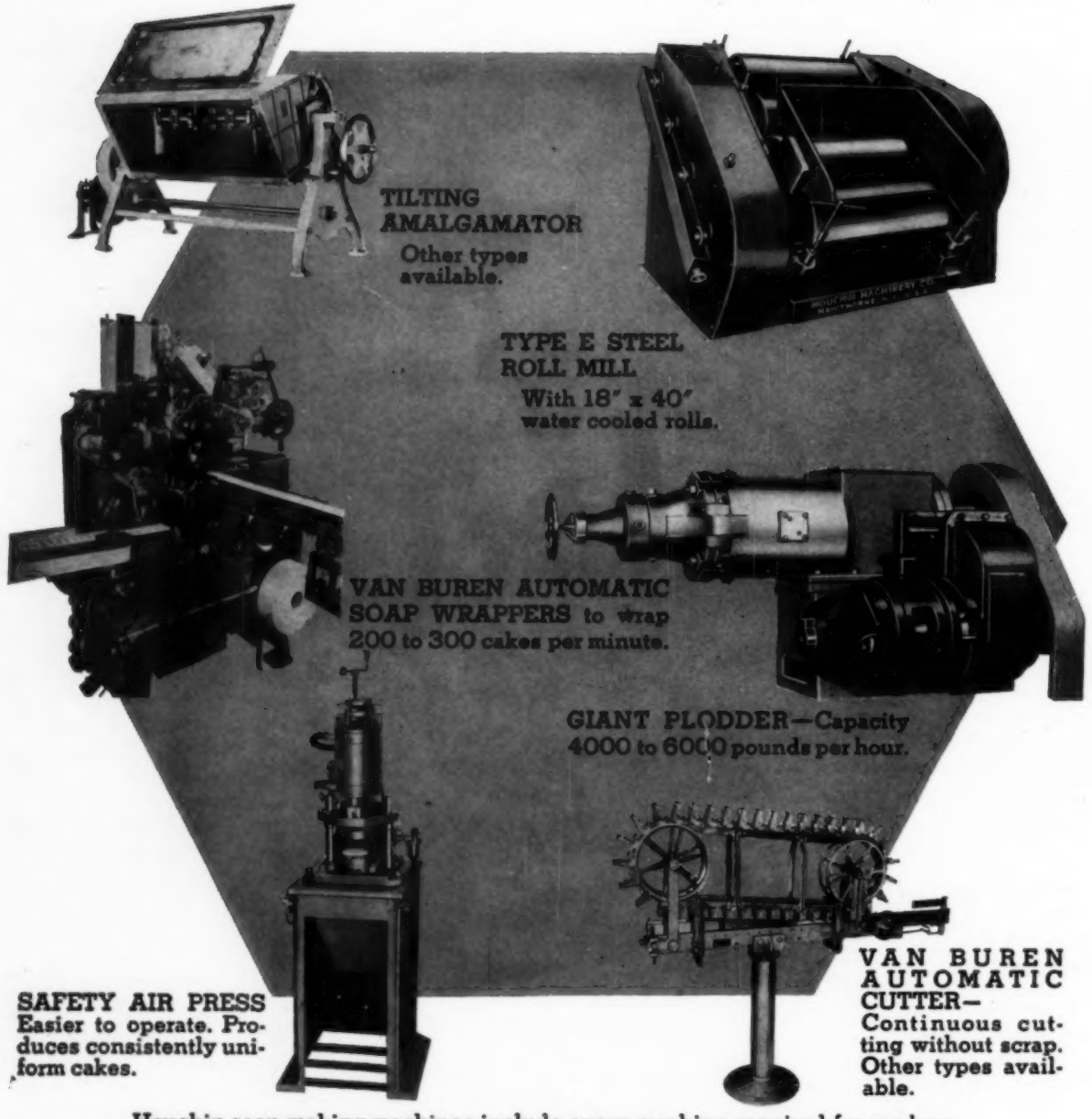

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Spray Drying

SPRAY drying has moved well into the realm of the small producer, since plants exist with an output of as little as 0.7 tons of detergent an hour, and even less. According to an article by M. Fock in the March, 1952, issue of *Alchimist*, when rating the productivity of detergent manufacture the fact should be kept in mind that the drier should have a minimum size if satisfactory finished products are to be obtained.

One spray drier* discussed has an hourly output of 750 to 900 kilograms of cold sprayed washing powder, with 40-45 per cent fatty acid content, based on vegetable fatty acids. The same plant may be used without alterations to transform liquid basic soaps into dry soap containing about 82 to 84 per cent fatty acids. It appears that the soap thus produced may be milled in spite of its high fatty acid content.

Automatic packing of the powder and automatic conveyance are not always provided for in smaller plants since such devices are rather expensive. On the other hand, these automatic appliances may be added later. The capacity of a given plant may be increased without large investment and without affecting the quality of the washing powder in respect to size of the particles, volume, solubility, etc.

With spray drying equipment, small or moderate size plants are in position to compete with large factories. Spray drying is not only used in the manufacture of soap and washing powder but also in the making of synthetic detergents and base soaps for toilet soap.

A considerable number of detergent powders are made by the spray process, because of its many advantages. Among these are the uniformity of the powder, the fact that it is ready for immediate packing, and excellent solubility. The powder consists of hollow particles. Usually the weight as compared with the volume is 0.6 kilogram per liter. But even this may be reduced by taking some precautions which will result in an even better solubility.

There are two spray drying systems: nozzle spraying, in which the liquid mass is atomized by stationary nozzles; disk spraying, in which the liquid is atomized by a disk rotating at very high speed.

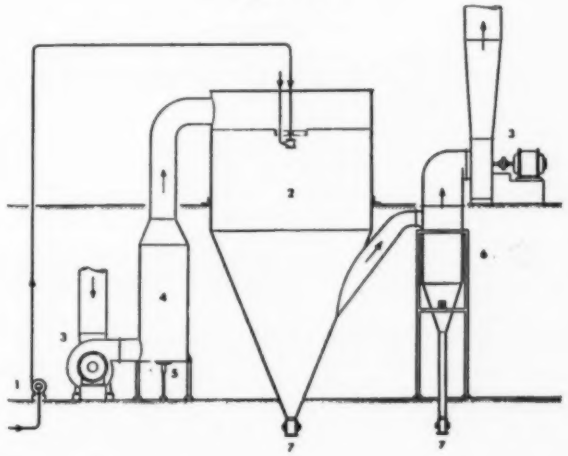
In the nozzle system atomization occurs under very high pressure. The diameter of the nozzles may be changed so as to regulate the size of the atomized powder particles. If finer powders are required the diameter of the nozzle should be narrowed and the pressure increased. The output of nozzle spraying depends upon the pressure applied, the resistance of the mass; in other words, its viscosity and the diameter of the nozzle.

The mass should be rather viscous, because if it is fluid, the output of the machine may be excessive, and the powder thus obtained would be too moist.

If the mass contains undissolved solid particles these may clog the nozzle, causing an interruption of manufacture in order to clean or to change the nozzle. This drawback is one of the reasons why nozzle spraying has been superseded by disc spraying. Another disadvantage of nozzle spraying is that nozzle openings increase with use so that either the pressure must be lowered or new nozzles used.

Figure 1 illustrates the principle of nozzle spraying. An air compressor (3) carries fresh air through a system of heating apparatus into the spray tower. If washing powder is manufactured, which may not crystallize, the air should not be previously heated. However, for the spraying of pure soap, the air is heated.

Figure 1



* Krause spray drier, made by Lurgigesellschaft fur Warmetechnik, Frankfurt am Main, Germany.

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Through a pump (1) the air is carried to the nozzles, which receive the mass from the pipes shown at the left.

The sprayed powder on contacting the drying air, dries or crystallizes and falls to the conical bottom of the tower into the opening. (7). From there it drops into containers or onto a conveyor.

The air removes a certain amount of powder which is separated by filters or cyclones (6) and falls through the opening (7) onto the conveyor. This process works according to the continuous principle, the material and the air moving in the same direction.

The disk spray system is preferred for drying washing powders, bleaching soda, soaps, etc. In this system fast rotating disks operating rather simply may give a production volume of up to 10 tons or more of washing powder per hour. Owing to the quick rotation of the spraying disks the liquid reaches an absolute speed of approximately 330 to 500 feet per second or more. Thus an extremely fine division of drops is obtained, which can only be reached in the nozzle spraying system with very high pressures. The very fine atomization of the drops is proved by the surface which the liquid occupies after spraying. It may reach several hundred square meters per one litre of liquid, which is nearly equivalent to the fine division of the fog.

Figures 2 and 3 are schematic drawings of the Krause disk spraying system. Figure 2 shows a spray drier with a conic metallic drying room. The drying air and the mass (washing powder or soap) are led downward in continuous current. The installation is provided with a cleaning system consisting of contrifugal separators.

Figure 3 shows a spray drier with drying rooms of reinforced concrete, or cinder block, or glazed brick. The air and the mass are led downward in a continuous current. This plant has an output of about 1500 kilos of cold sprayed washing powder per hour. It saves space, because it is provided with a tube adapted at the periphery of the drying room.

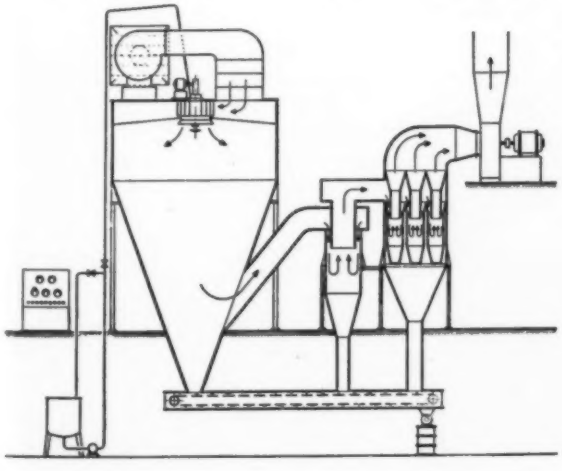
For the manufacture of washing powders, bleaching soda, etc., the fresh air is not previously heated, inasmuch as the atomized mass must be cooled by cold air and dried by crystallization. The crystallization water is chemically bound by soda, and only a small part of the moisture is taken away with the air. Pre-heated air is used for washing powders with a fatty acid content over 40 or 45 per cent, and also for fine synthetic detergents. The reason for this is that the solution water is not bound as crystallization water, but evaporates and is removed by the air. Such washing powders must be made from a more fluid mass, one that contains more moisture. As a result evaporation is required during drying.

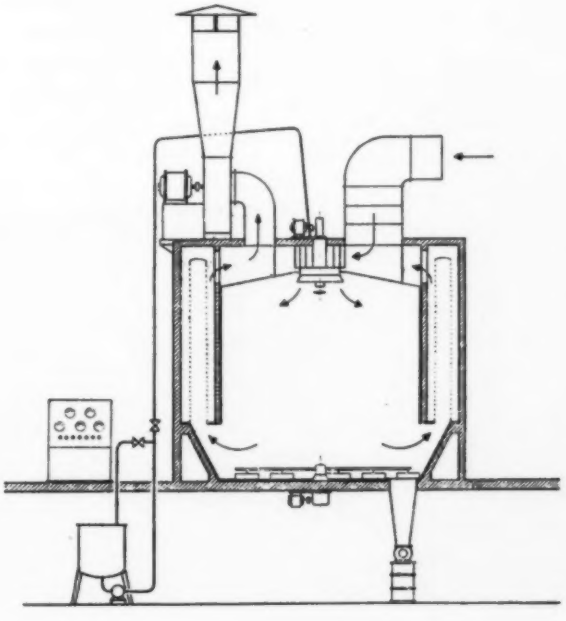
The water is evaporated in the neighborhood of the spraying disk by preheated air, which is thus partly cooled. In the case of high percentage washing powders, manufactured with soda ash, this cooled air serves for cooling and binding the crystallization water to the soda. The liquid mass conveyed to the disk, rotating at speed of five to 15,000 r.p.m., is hurled at high speed into the surrounding current of fresh air, thus forming a mist.

The water evaporates or the mass is dried by crystallization, and the dry powder falls to the bottom of the spray tower. By some mechanical appliance the powder is carried away from the bottom of the tower to a conveyor which may be of a screw, belt or pnuematic type. Pneumatic conveyors are the most profitable. The air current is produced by a ventilator fitted under the tower. The washing powder or soap powder or bleaching soda conveyed with fresh air has sufficient time to dry completely. The washing powder is completely cooled so that it may be packed immediately without any danger of the formation of agglomerates in the package.

Usually the powder leaving the spray tower is sufficiently dry. How-

Figure 2 (below): Figure 3 (right)





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ever, pneumatic conveyance affords a means of improving the condition of the powder. Another advantage of pneumatic conveyance is absolute cleanliness. Pneumatic conveyance does not involve considerable investment inasmuch as powder may be conveyed to any place in the factory through relatively narrow pipes.

Committee D-12 Meets

REPORTS on the work of its subcommittees, technical papers on detergent testing and metal cleaners, as well as a symposium on statistical methods for the detergent laboratory were among the highlights of the recent annual meeting of Committee D-12 on Soap and Other Detergents of the American Society for Testing Materials, held at the Park Sheraton Hotel, New York.

At the general session, J. C. Harris of Monsanto Chemical Co., Dayton, O., was re-elected chairman of Committee D-12. Other officers chosen for another year are vice-chairman, Fredrick Krassner, chief chemist, U. S. Naval Supply Activities, New York Navy Yard, New York, and secretary, H. R. Suter, Wyandotte Chemicals Corp., Wyandotte, Mich. Also at this session Mr. Krassner was recommended by Committee D-12 for the meritorious award of the American Society for Testing Materials. The award is presented at the Society's annual meeting, in June. The resignation of J. A. Woodhead of Colgate-Palmolive-Peet Co., Jersey City, N. J., as chairman of subcommittee T-5, Physical Testing, was announced during the general session.

Subcommittee reports and recommendations presented during the general session included that of subcommittee T-1, Joint American Oil Chemists' Society and A.S.T.M. Analysis Committee, with Eugene W. Blank of Colgate-Palmolive-Peet Co., Jersey City, N. J., as chairman. The subcommittee summarized its activities as follows: A colorimetric method for the determination of copper in soap is presently under study. A modification of the method for the determination of carbonate, suggested in a paper published in 1950 in the journal of A.O.C.S. is also being investigated.

J. C. HARRIS

Subcommittee T-1 also reported that a procedure for the determination of borax in soap was to have been submitted to the Uniform Methods Committee of A.O.C.S. Procedures for both determination of carboxymethylcellulose in soap and soap-synthetic detergent mixtures and for the determination of color of soap are being considered as future objectives of the committee.

Standards D460-46, Methods of sampling and chemical analysis of soaps and soap products, and D820-46, Methods of Chemical Analysis of Soaps Containing Synthetic Detergents having stood for six years were reapproved.

Subcommittee T-2, Analysis of Synthetic Detergents, reported through its chairman, Rubin Bernstein of the Philadelphia Navy Yard, that a bibliography of analytical methods will be issued. He also reported that a task committee had been appointed to compile the best features of two methods of evaluating synthetic detergents. Following this, cooperative samples of the synthetics will be sent out for analysis. D500, Method of Analysis of Sulfated and Sulfonated Oils, tentative since 1946, was reaffirmed.

Subcommittee T-2, Analysis of Dry Cleaning Materials, did not meet, it was reported. Methods have changed so much that specifications would be confusing the committee reported. Tentative specifications may be set up by next year.

Reporting for subcommittee T-4 (Analysis of Alkaline Detergents), W. H. Koch stated that a method of analysis for sodium bicarbonate had been developed. A motion that the method be approved was carried. Future work of the committee calls for a method of analysis for sodium orthosilicate.

Consolidation of the work it has on hand was reported by subcommittee T-5, Physical Testing. The new chairman of T-5 is Anthony M. Schwartz, of Milton Harris Associates, Washington, D. C. He succeeds J. A. Woodhead of Colgate-Palmolive-Peet Co., Jersey City, N. J., who resigned.

Subcommittee T-6, Analysis of Metal Cleaners, with J. C. Harris as chairman recommended that D800-45, Methods of Chemical Analysis of Metal Cleaning Compositions be made standard. This was voted. Mr. Harris pointed out that the question of corrosion of home washing machines by detergents was being investigated in two ways: 1.) Determination of the corrosive effects of detergents on alumi-

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2 *Add small quantity of Carbose to one and dissolve.*

3 *Add carbon suspension to each jar.*

4 *Place a cloth swatch in each.*

5 *Cap jars and shake for 10 seconds.*

6 *Withdraw swatches.*

7 *Place swatches in rinse water.*

8 *Rinse by shaking for 5 seconds.*

9 *Remove swatches . . . and COMPARE!*

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It's no surprise. In carefully controlled tests on cotton, this outstanding "detergency promoter"—as little as 1%—*increased soil removal and whiteness retention as much as 10% to 40%* in different formulations with synthetic detergents and builders. CARBOSE promotes long-lasting suds, reduces skin irritation—ideal for dishwashing, car-washing and other compounds where emolliency is desirable.

This superior product is typical of Wyandotte. For the quick facts on current production, improvement and development of other Wyandotte chemicals for soap and synthetic formulations, read the "Bulletin Board," left. For samples with which you can make the above test yourself or for more complete information, write—*Wyandotte Chemicals Corporation, Wyandotte, Michigan. Offices in Principal Cities.*

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num and vitreous enamel surfaces, and 2.) by determination of alkaline resistance of vitreous enamel. It was also reported that a task group was being appointed to develop classifications of metal soils. Soil determinations methods are to be summarized, Mr. Harris said. A total immersion metal cleaning method is under investigation, he said.

Fredrick Krassner, chairman of subcommittee S-1, Specifications for Soap, said that the title of Specification D497-39, has been changed from "ordinary bar soap" to "ordinary laundry bar soap". Also changed in the specification are the specific limits for "sum of free alkali or free acid and other matter insoluble in alcohol and sodium chloride". They have been raised from 2.0 to 10 percent to 2.0 to 11 percent.

Reapproved were D533-44 (Built Soap, Powdered) and D534-42 (Alkaline Soap, Powdered).

The sum of free alkali, alcohol insoluble and salt has been raised from three to four percent in Solid Palm Oil Soap Specification D535-41. In specification D536-42, Palm Oil, Chip Soap the sum of free alkali, alcohol insoluble and salt was raised from four to six percent.

In D630-42, Olive Oil, Chip, and D592-42 Olive Oil, Solid, the sum of free alkali, alcohol insoluble and salt were raised from three to four percent for the latter and from four to six percent for the former.

The title of Specification D593-42 (Salt Water Soap) has been changed to "Hard Water Soap".

D691-44 (Compound, Powdered Soap) has been reapproved. Color specifications for certain types of soap are under consideration, Mr. Krassner said. Soaps for which such specifications might be set up include high titre chip, and low titre laundry. Color specifications for these soaps would be premature now, but such specifications should be considered, Mr. Krassner said.

On the subject of new specifications consideration is continuing to be given to that for concentrated liquid soap. The feeling of the subcommittee is that such a specification is not ready for adoption.

Other specifications under consideration are for grit soap for fine and rough work. Elimination of the word "soda" from the specification for 15 percent anhydrous liquid soap D799-45 was agreed upon by the subcommittee.

Subcommittee S-2, Specifications for Synthetic Detergents, is currently inactive and no report was made at the meeting.

In the report of subcommittee S-4 (Alkaline Detergents), which held a joint meeting with T-4 (Analysis of Alkaline Detergents), two courses of action were recommended: 1.) Advance Specification D928-47T from tentative to standard, and 2,) Reapprove the following without change: D458-39 (Soda Ash); D457-39 (Modified Soda Ash, Sesquicarbonate type); D537-41, Sodium Metasilicate; D584-41, Sodium Sesquisilicate and D538-44, Trisodium Phosphate.

S-4 also recommended reapproval of the following with editorial changes: In D456-39, Caustic Soda, insert the word "anhydrous" in the title and in sections 2, 3 and 4 following the words "caustic soda"; in D595-45, Tetrasodium Pyrophosphate (anhydrous), insert the word "flake" in section 2 so that the description reads, ". . . a white, uniform product in either granular, powdered or flake form, as specified by the purchaser", and in section 3, change the specification for "matter insoluble in water, max. percent" so that it reads "0.2" instead of "0.20".

Other projects outlined include exploring possibility of eliminating the "extra light" type adding a "dense"

(*Turn to Page* 145)

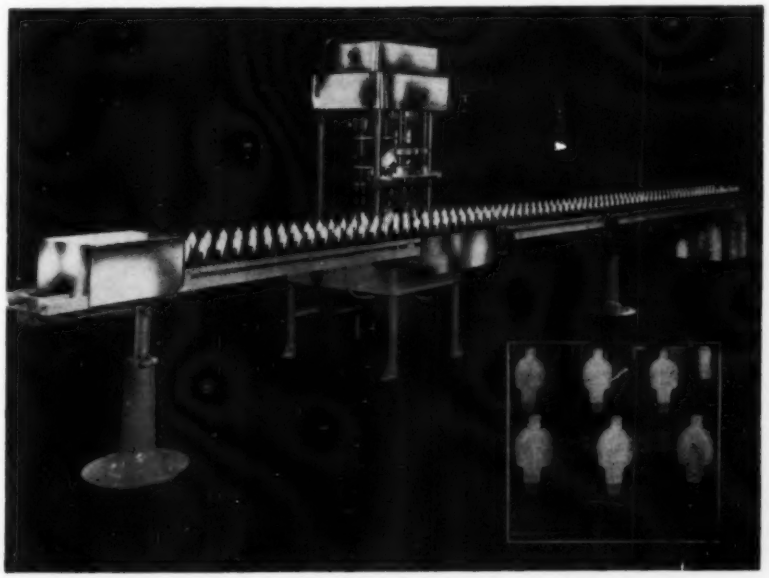
MRM Offers New Filler

A new high-speed rotary filler for small polyethylene containers was announced recently by MRM Co., Brooklyn, N. Y. It is capable of filling up to 175 containers per minute.

Specially designed adaptors are spaced over the entire length of the conveyor, firmly holding the container in place while filling. All other operations such as capping, insertion of plugs, and code dating are accomplished automatically on this same conveyor. Operators simply drop containers into the adaptors on the intake line and remove them after all operations are complete, at the end of the discharge side of the conveyor.

The fully automatic 12-spout rotary filler is of the gravity feed type, but it could be a vacuum filler if required. An integral supply tank and float control is supplied with the machine. The driving mechanism is totally enclosed in a stainless steel cabinet, mounted above the floor to prevent dirt and foreign matter accumulation.

New MRM rotary filler for polyethylene containe.s. Inset shows adaptors.



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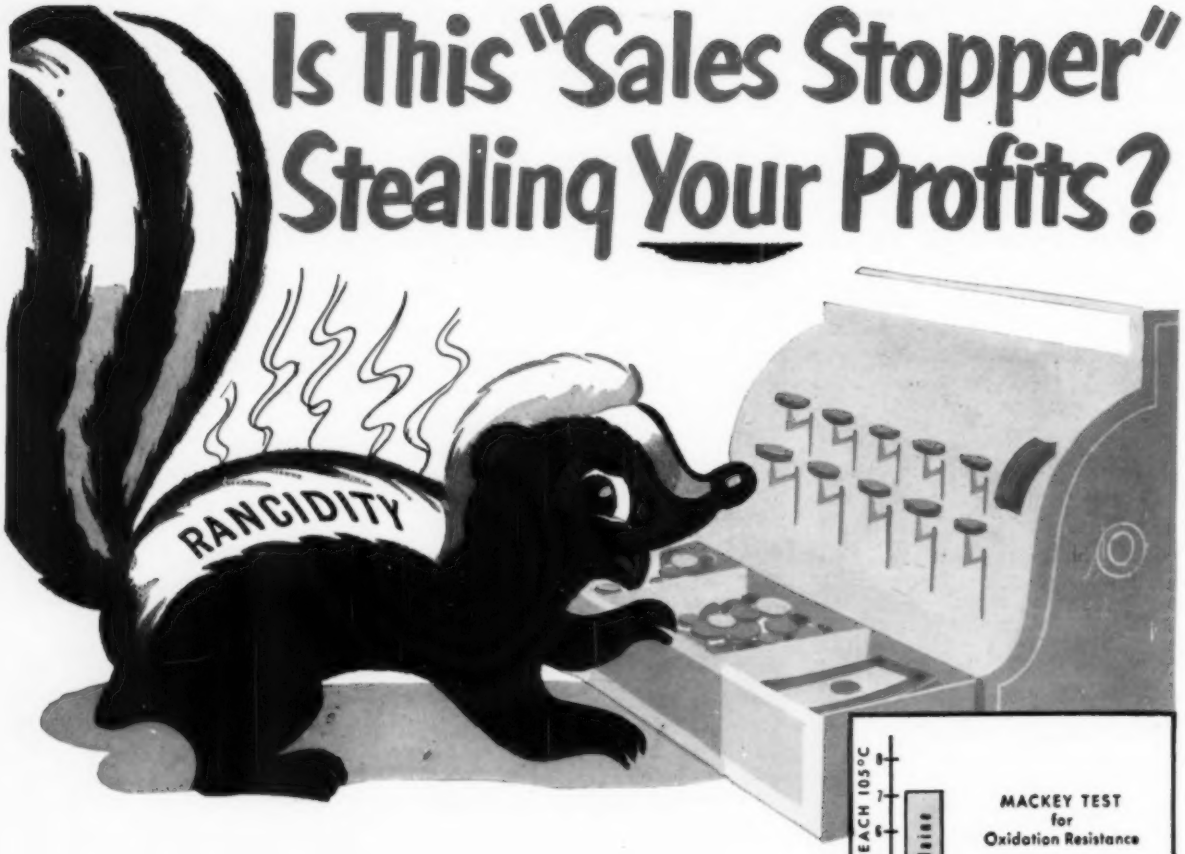

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Offensive, rancid odors in your products can destroy sales and profits. Don't let this happen to you . . . buy Emersol Stearic and Oleic Acids and keep your products as fresh and appealing as the day they were made.

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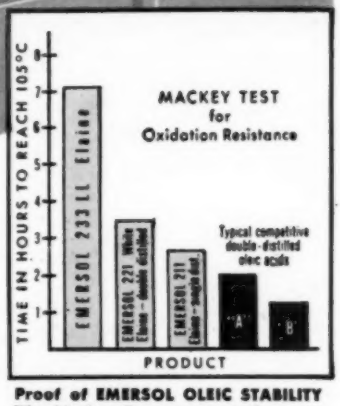
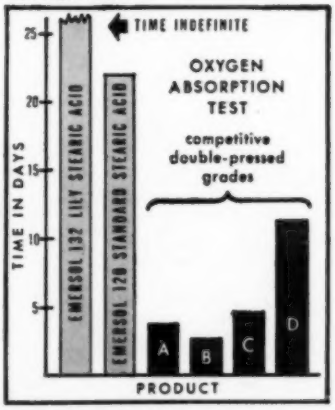


Proof of EMERSOL OLEIC STABILITY
The Mackey Test measures the auto-oxidation tendencies of oleic acid . . . giving proof of the superior oxidation stability of Emersol Elaines, as indicated by longer times.



Proof of EMERSOL STEARIC STABILITY
This oxygen absorption test, which measures the time required for the absorption of a standard quantity of oxygen in a closed system, clearly illustrates the amazing stability of Emersol Stearic Acids.

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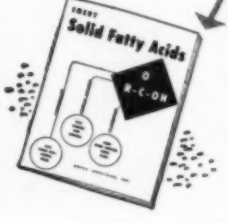

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PRODUCTION *Clinic*

By E. G. Thomssen, Ph.D.

GRINDING EQUIPMENT

THE majority of the granular or powdered raw materials used in making sanitary chemicals are delivered ground and ready for use. As a result grinding equipment generally is not required. There are many cases, however, where stocks of ground raw materials become lumpy in storage or where it would be economical to buy unground substances and do the milling on the spot. We have already pointed out that more thorough blends are obtained by milling a powdered composition after it has been blended in a dry mixer. In cases where powdered soap is used in quantity it may save on cost to buy the dried soap chips and grind them in the compounder's plant.

Grinding equipment includes such machines as pulverizers, grinders, mills, comminutors, crushers and granulators. Crushers and granulators are used to produce coarser mesh materials, while the other milling turns out products of finer mesh. As crushers and pulverizers find but limited use in the sanitary chemicals industry, they are given only passing mention.

Mills, pulverizers and grinders employ various procedures to reduce coarser dry materials to the desired degree of fineness. Most generally used for sanitary chemicals are attrition mills and hammer mills. Other grinders such as ball and pebble mills, chaser or pan mills, rod mills, roller mills and buhr mills rarely are used. For this reason only attrition mills and hammer mills will be considered in detail.

The distinction between attrition mills and hammer mills is slight. In pulverizing by the attrition principle, the material usually is reduced in size by two high speed rotors revolving in opposite directions. This causes particles to collide at high speed and break apart. In hammer mills the particles are pulverized by being struck by a series of high velocity rotating beaters or hammers. In either a hammer or attrition mill, both attrition and hammering operate to break up solid pieces.

DR. THOMSSEN

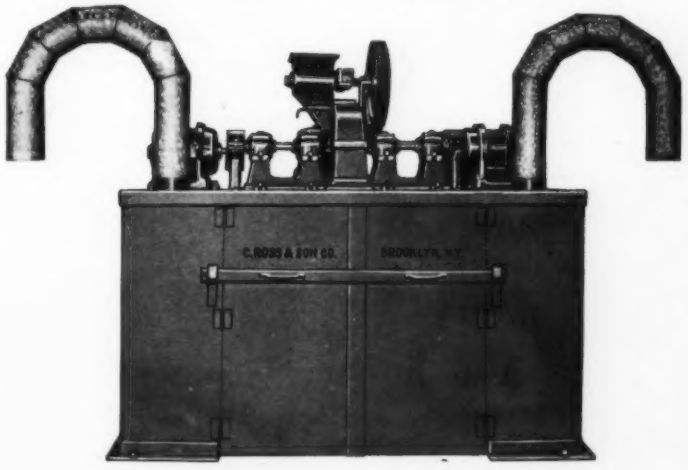
The selection of a right mill depends upon the nature of the material to be ground, the capacity required, the fineness desired and the control of dust. Milling equipment manufacturers maintain laboratories and cooperate with potential users of their equipment in selecting appropriate machines. It is always well to consider several mills before deciding upon one. In cases where very fine mesh finished material is desired, the question of air separation should be given much consideration. Dusty materials are costly and troublesome if not controlled correctly. The desirability of selecting a mill which is properly equipped with fans, cyclones and other dust preventing devices is very important.

Sifting Equipment

SIFTERS, sieves and screens are found extensively in both large and small chemical specialty plants. Sifting and sieving more generally apply to handling dry powdered products. Screening may be more closely related to filtering and often is more concerned with the removal of coarse products from liquids. Screening operations are performed only occasionally in the sanitary products industry.

Correct and efficient sifting to produce the desired end product may be done in several ways. The more common of methods of sifting are by revolving type screens also termed trommels, by gyratory motion, by vibrating screens and through brush type sifters. Air separation is closely allied to sifting. Numerous makes of sifting equipment are on the market. They come in many different sizes and capacities. Some use but one screen or surface, while others comprise several surfaces which remove coarser particles progressively. This speeds up the

Motor driven disintegrator with feeder made by Charles Ross & Son Co., Brooklyn. Model shown is No. 66, 12 inch size.



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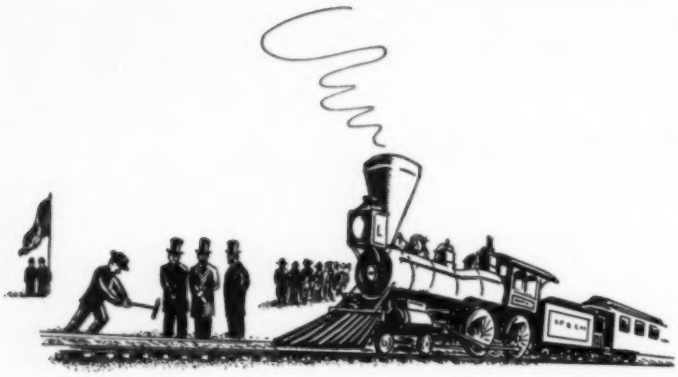

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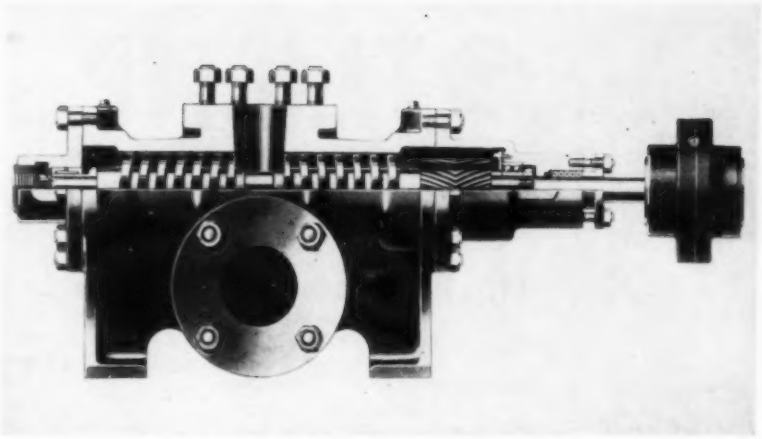


A Warren-Quimby Screw Type Rotary Pump made by Warren Steam Pump Co., Warren, Mass. Side view shows rugged shafts and full herringbone gears.

operation considerably.

Vibrating screens are actuated by mechanical or magnetic impulses. Occasionally revolving screens vibrate as they rotate. Brush sifters are of value where it is necessary to break up lumps caused by dampness of packing or ground materials. Some sifters are so designed that both mixing and sieving operations may be performed at the same time. In such cases, the sifter is mounted over the mixer.

Consideration should be given in selecting sifting equipment, to the amount of clogging of the wire screen or cloth that is liable to occur. The capacity of the machine is most directly related to clogging. For this reason not only must consideration be given to the mechanical principle used, but even more attention must be paid to the selection of the cloth or wire screen used in the sifter or screen. Various materials, such as wire, silk and synthetic fibers, are readily available to handle almost any powder. Handlers of screen cloths are always willing to give the benefit of their experience regarding this important sifting detail.

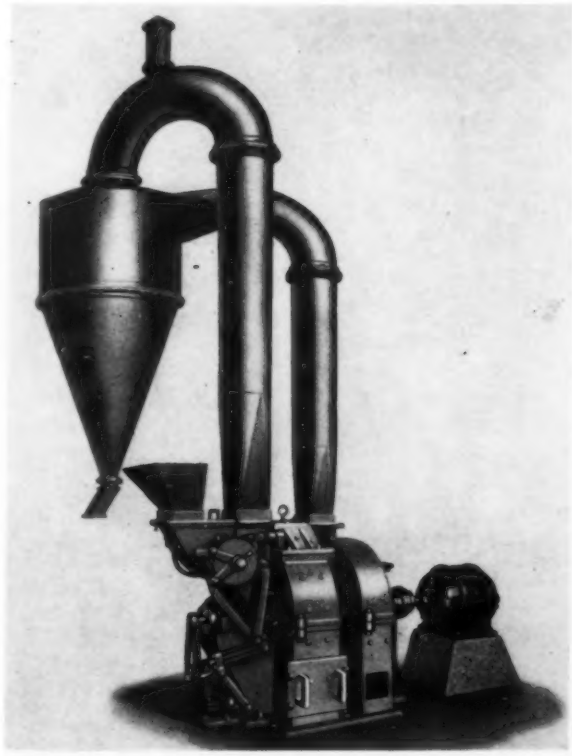
Pumps

PUMPS are widely used in the sanitary chemical specialty field. They transfer liquids, feed filter presses, are employed as boiler feed pumps, for proportioning liquids during manufacturing operations, for cleaning out sumps, to supply water from wells, to produce pressure and vacuum and in filling drums. Pumps are motor driven, steam driven, air driven and may be operated by hand. The variations in uses are so numerous and the types so many that we will consider briefly only their use in processing procedure. This involves liquid transfer, proportioning, filter pressing, air pressure build up and vacuum production.

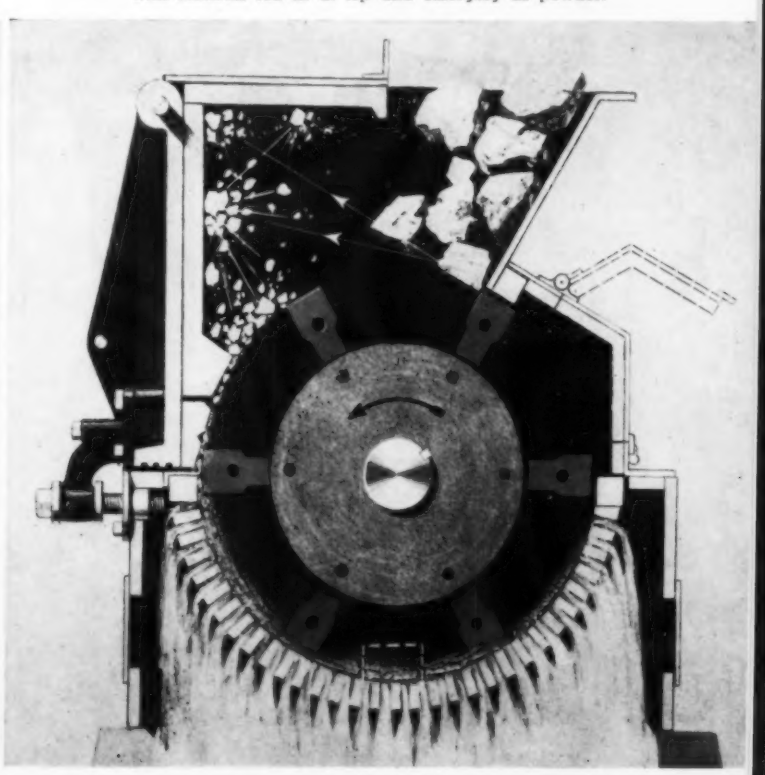
Pumps used for the processing operation include centrifugal, rotary, reciprocating, diaphragm, and gear pumps. The selection of the best types for different applications is highly

(*Turn to Page 86*)

Standard Imp mill made by Raymond Pulverizer Div., Combustion Engineering - Sperheater, Inc., Chicago. Product is ground by impact with swing hammers.



Swing hammer pulverizer made by Jeffrey Mfg. Co., Columbus, O., showing cutaway cross-sectional view with material fed in at top and emerging as powder.



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Designed for quick changeover and thorough cleaning. Fills all types of foamy and still liquids — brines, vinegars, chemicals, drugs, perfumes, syrups and cosmetics. All sizes and shapes of containers.

A model for every need—
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Production capacity up to 30 containers per minute.

Particularly suited for companies with modest packaging requirements. Ballbearing casters permit moving the filler anywhere. Low in cost and simple to maintain. Ideal as an auxiliary filler.

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It's trim, smart and smiling — gleaming white enamel over heavy gauge steel body.

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TANCTYP operates easily — 200 times per ounce of soap. Can be installed by any handyman, in just a few minutes, on any washroom wall.

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Quality-proven Soap Dispensers and Dispensing Equipment

Products and PROCESSES

Floor Cleaner

Cleaning and disinfecting compositions for floors, etc., contain a liquid preparation of soap in admixture with cresylic acid, containing no added water, together with a synthetic detergent such as sodium alkyl sulphate of medium carbon-chain length. The soap specified comprises potash soft soap. In use, the compositions may be diluted with water—e.g., one part to 100 parts of water. Brit. Pat. 613,968.

Detergency Measusement

Effectiveness of water-soluble detergents is measured by laundering cotton fabric soiled in a standard manner. The soil consists of a fat, a fat-soluble organic coloring (1) (green Organol J), and a solvent. Reasons for choosing this mixture are discussed. The fat should have an acid No. 0 and iodine number less than 10. Black pigments are considered unsuitable. The cloth is desized, dried, and impregnated with a solution of 10 parts fat, 0.2 parts 1, and 90 parts $PhCH_3$ so that the take-up of soil is 10 per cent of the original weight of the cloth (dry basis). The soiled cloth, fastened to a metal frame, is rotated at 50 r.p.m. in the detergent solution. Whiteness of the specimen is measured. *Oleagineux VI* 6, 345-50(1951).

Detergency Meter

An impact test washer is described in *American Dyestuff Reporter*, 40, 693-6 (1951) which is used with reflectance measurements to evaluate detergency action.

Steel Wool Soap

Steel wool soap contains a proportion of soda in order to prevent rust formation on the steel wool, together with a proportion of an alkali metal silicate, such as waterglass, in order to prevent by means of the soda present the corrosion of certain metals during use. The steel wool soap may also contain a proportion of an alkali metal phosphate. The compositions contain water, and in an example the latter contains a small amount of methylcellulose. British pat. 613,462.

Varnish Removing Soap

A nail varnish removing liquid soap that dissolves, removes unwanted varnish or lacquer from the nails was announced recently by M. & R. Norton, Ltd., associate company of Cavalcade Beauty Preparations, Ltd., England. The product is being marketed under the trade name "Dellac."

Dog Tick Formulations

Control of *rhipicephalus sanguineus* (brown tick) on dogs was effected with 2 per cent chlordane dust or one per cent gamma-BHC dust without harm to the treated dogs. DDT (five per cent) and lime activated sabadilla (five per cent) were relatively ineffective. *J. Econ. Entomology*, 44, 991 (1951).

Coconut Oil Process Patent

A new process for producing coconut oil is covered by U. S. patent No. 2,583,022 recently granted to Axel L. Sodergreen, West Disinfecting Co., Long Island City, N. Y.

As indicated in the flow sheet the whole coconuts as received are passed to an inspection zone (10). From there the undiseased nuts are conveyed to a steam chamber (11) in which they are subjected to saturated live steam. This treatment sterilizes the exterior of the coconut shell, killing active enzymes and deteriorating micro-organisms. In addition the heat penetration tends to loosen the meat from the inside of the shell preparing the nuts for the next step.

From the breaker (12) the meat passes through various stages to the second stage dehydrator (19) from which the dried chips and copra are discharged into a surge bin or storage tank which feeds the grinder or macerator (20).

In the macerator the dried chips and copra are subjected to a grinding or maceration treatment to produce an oily slurry in which the particle size of the meal thus formed is such as to permit its ready separation from the oil in the subsequent separation treatment. This slurry is transferred by suitable pumps and piping to a slurry tank which feeds the oil separator (21).

From the oil separator the coconut oil may be passed through an oil clarifier (24) where it is filtered to remove all meal particles and then transferred by pumps and pipe line to the oil storage tank (25). The oil thus produced without further treatment is of high quality; it is sweet smelling and has practically no tendency to develop rancidity even after storage for long periods of time. If

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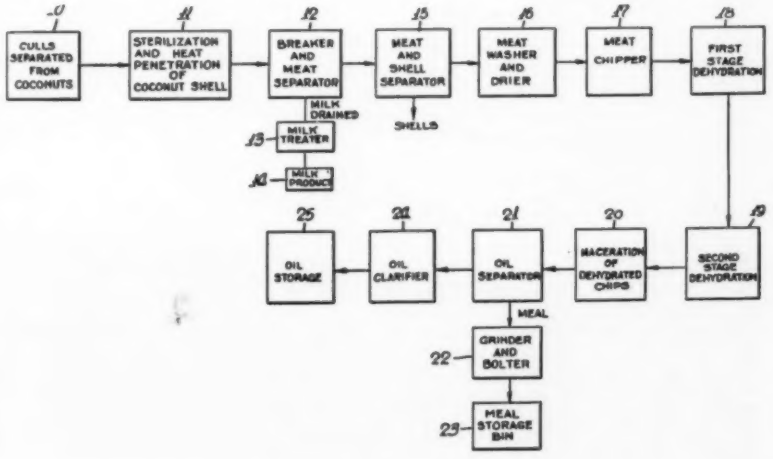

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THE ECONOMICAL DETERGENT SILICATE

Cowles DRYMET, anhydrous sodium metasilicate, is the most highly concentrated form of sodium metasilicate available. One pound of DRYMET is equivalent to 1.6 lbs. of sodium metasilicate pentahydrate. DRYMET contains no water of crystallization. It is more economical to use, on the basis of both Na_2O (alkalinity) and SiO_2 (silicate), than any other type of hydrated or anhydrous detergent silicate, either compounded or by itself.

*Reg. U. S. Pat. Off.

DRYMET IS USED IN COMPOUNDING SUCH PRODUCTS AS:

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3. Metal Cleaners
4. Dairy Cleaners
5. Dishwashing Compounds
6. General Purpose Cleaners
7. Soap Builders
8. Paint Cleaners
9. Paper De-Inking Compounds
10. Household Cleaners

DRYMET HAS THE FOLLOWING ADVANTAGES:

1. Reinforces "wetting-out" action
2. Lowers surface tension of water
3. Resists rapid exhaustion of cleaning solution
4. Improves and stabilizes emulsifying and deflocculating power of solution
5. Resists changes in pH because it is a "buffered" alkali.

We'll be glad to send you our DRYMET File Folder containing complete technical information and suggested formulations.

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NEW Patents

The information below is furnished by patent law offices of

LANCASTER, ALLWINE & ROMMEL

402 Bowen Building
Washington 5, D. C.

The data listed below is only a brief review of recently issued pertinent patents obtained by various U. S. Patent Office registered attorneys for manufacturers and/or inventors. Complete copies may be obtained direct from Lancaster, Allwine & Rommel by sending 50c for each copy desired. $1.00 for Canada. They will be pleased to give you free preliminary patent advice.

No. 2,586,897. Detergent Composition, patented by Willard Howard Woodstock, Crete, Ill., assignor to Victor Chemical Works, a corporation of Illinois. A detergent composition is covered comprising 1 to 75 parts by weight of the neutral organic ester reaction product of a lauryl acid ester of a phosphorus acid selected from the group consisting of ortho, pyro, and polyphosphoric acids containing at least one acidic hydrogen atom and an olefin oxide selected from the group consisting of ethylene oxide and propylene oxides in the proportions of at least three moles of ethylene oxide and two moles of a propylene oxide for each acidic hydrogen atom, mixed with 99 to 25 parts of an alkali metal salt of a molecularly dehydrated phosphoric acid.

No. 2,585,129. Process of Preparing Fatty Compounds, patented by Arthur I. Gebhart, Union, and John Ross, Ramsey, N. J., assignors to Colgate-Palmolive-Peet Company, Jersey City, N. J., a corporation of Delaware. The patent describes a unitary process of preparing fatty acid compound containing an odd number of carbon atoms in the molecule and numbering at least 7, which comprises dissolving in solution of peracetic acid in acetic acid a monoolefin of the formula

$$R_1=R_2$$

wherein R_1 and R_2 represent alkyl groups of which one group at least contains an odd number of carbon atoms and not less than 7, reacting said mono-olefin with said peracetic acid to oxidize selectively said monoolefin and form a hydroxy-substituted saturated hydrocarbon as a reaction product, saponifying and acidifying the same to yield a dihydroxy saturated hydrocarbon having a hydroxyl group attached to each of the contiguous and previously unsaturated carbon atoms of said olefin, selectively oxidizing said dihydroxy saturated hydrocarbon by treating the same with periodic acid to cause cleavage between said contiguous hydroxylated carbons and form thereby a fatty aldehyde containing an odd number of carbon atoms in the molecule, further selectively oxidizing said fatty aldehyde by dissolving the same in a solution of peracetic acid in acetic acid to form the corresponding odd-numbered carbon fatty acid, and separating and recovering the resultant odd-numbered fatty acid compound.

No. 2,584,413. Cleaning and Polishing Composition, patented by Maurice E. Baer, Boston, and Leo E. Concannon, Waban, Mass.; said Baer assignor to said Concannon. A cleaning and polishing oil-in-water emulsion is determined, comprising an oil phase consisting of 0.5 to 15% silicone oil and 75 to 10% volatile hydrocarbon solvent, 24.5 to 75% water, and 0.1 to 12% cationic emulsifying agent.

No. 2,586,496. Detergent Composition and Process of Preparing Same, patented by Harland H. Young and Kurt H. Spitzmueller, Chicago, Ill., assignors to Swift & Company, Chicago, Ill., a corporation of Illinois. 1. In the process of preparing an improved alkylolamine detergent from products comprising essentially the condensation product of an alkylolamine having at least 1 acylatable hydrogen atom in the amino group and a fatty carboxylic acid acylating material having from 8 to 14 carbon atoms in the carboxylic acid group in a ratio of at least 1.5 moles of alkylolamine to one mole of carboxylic acylating material, said materials being heated at a temperature of between 120° C. and 250° C. for a period of between 15 minutes and 16 hours in the presence of an excess of between ½ and 10 mols of the alkylolamine to form alkylolamide and alkylolamine ester condensation products, and then cooling below 160° C. and maintaining the said products at a temperature of between 40° C. and 90° C. for a period of between 4 and 100 hours to form reaction products containing compounds having a single replaceable hydrogen atom of the alkylolamine replaced with an acyl group, the improvement described in the patent comprises: reacting a higher carboxylic acid acylating material having more than 14 carbon atoms in the carboxylic acid group with the excess alkylolamine present in the condensation reaction mixture after cooling below 100° C. to form between approximately 10 and 50 percent of a higher alkylolamine soap in said mixture, thereby improving the detergent properties and suppressing the sudsing properties of the said reaction products.

No. 2,584,105. Insect Repellents, patented by Paul D. Bartlett, Weston, Mass., and Blaine C. McKusick, Wilmington, Del., assignors to the United States of America as represented by the Secretary of the Army. An insect-repellent composition is covered comprising dimethyl-hexahydrophthalate in an inert non-gaseous organic carrier.

No. 2,587,478. Method of Production of Pyrethrin Concentrate from Whole Pyrethrum Flowers, patented by Michael Alexis Jernakoff, New York, N. Y., George H. Batt, Elizabeth, and Nicholas A. Sankowsky, Scotch Plains, N. J., assignors, by mesne assignments, to Standard Oil Development Company, a corporation of Delaware. The patent describes a process for obtaining strong extracts of pyrethrins from whole pyrethrum flowers which comprise the steps of contacting the whole unground pyrethrum flowers with petroleum distillate pyrethrin solvent at atmospheric pressure and temperature to obtain an extract of predominantly inert materials from the whole flowers; discarding this extract conterials; comminuting the resultant marc; contacting the comminuted marc with fresh petroleum distillate pyrethrin solvent at atmospheric pressure and temperature; and withdrawing the resulting strong pyrethrin extract.

No. 2,585,493. Process for Destroying Pests Comprising the Application of the Dibutyl Acetal of Aminoacctaldehyde to the Pest, patented by Emily M. Owen, Easton, Pa., assignor to General Aniline & Film Corporation, New York, N. Y. The patent describes a process for destroying pests which comprises applying thereto dibutyl acetal of aminoacetaldehyde.

No. 2,585,755. Poisons for Destroying Insects Selectively by the Use of Alkali-Soluble Coatings on Said Poisons, patented by Franz Duspiva, Tutzing, Oberbayern, Germany, assignor to Pest Control Limited, Bourn, England, a British company. The patent describes 1. A poison for destroying insects which comprises particles of a highly chlorinated hydrocarbon stomach insecticide coated with alginic acid; 2. A poison for destroying insects which comprises particles of a highly chlorinated hydrocarbon stomach insecticide coated with cellulose - acetate - hydrogen - phthalate.

They discovered

Although early Greeks and Romans had a crude form of soap, they used it only for washing clothes. For personal cleansing they took steam baths, then beat themselves with twigs to loosen dirt. Gradually, as soap improved over the years, they discovered its virtues in bathing.

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Associated Chemical Co. of Canada, 14 Darrell Ave., Toronto, Ontario
Chas. S. Tanner Co., 1815 Liberty Life Bldg., Charlotte, North Carolina

By John W. McCutcheon

SYNTHETIC detergents are not as easy to spray dry as soap. One difficulty is their higher content of inorganic salts, particularly sodium sulphate, which requires such corrosion resisting construction material, as stainless steel for the tower walls. Another adverse factor in spray drying synthetics is their abrasive action on the nozzles. This action usually is overcome by using tungsten metal inserts. The inflammability of synthetic detergents when they are reduced to a fine powder necessitates frequent cleaning of the tower by some mechanical sweeping device or by steam or water washing. A still further complexity is caused by the hydration of the inorganic salts during crutching. The polyphosphates, for example, have a tendency to lump and block the screens to the nozzles and even the nozzles themselves. This condition may be improved if a fast moving disintegrator is installed between the crutcher and the screen. The knives should be set close enough to break up the small lumps. The knife cutter made by Sprout Waldron Co., Muncy, Pa., or a similar device may be used. Production in one plant where a disintegrator was employed was claimed to have increased 30 percent.

* * *

IN discussing the use of hexachlorophene (G-11*) in synthetic detergents it was mentioned in this column recently that a slightly larger amount of the germicidal material seems to be called for than in liquid soaps. Comments on this statement have been received from Dr. W. S. Gump of Givaudan Delawanna, Inc., New York and from Dr. B. Thurber Guild of Winthrop-Stearns, Inc., New York. Although space does not permit a full reproduction of their comments, a number of interesting points are raised which we will try to pass along below and which we hope will clarify this situation.

* Registered trade mark, Sindar Corp., New York.

Dr. Gump states that, "Our experience indicates that 'G-11' is just as active bactericidally or even more so in synthetic detergents than it is in soap. The behavior of 'G-11' is not contradictory to the general observation that germicidal potency of phenols increases with lower pH values.

"We do not believe that the formation of lime soaps is responsible for the retention of 'G-11' by the skin because the degerming action of 'G-11' soaps appears to be independent of the hardness of the water.

"We had prepared hexachlorophene with C-14 in the methylene bridge for a study of its uptake and retention by the skin of a baby pig.** A soap containing the radioactive 'G-11' was used and it was found that the rate of 'G-11' accumulation through a series of washings was slightly higher when water of 50 ppm of hardness was used than for water of 100 ppm. Furthermore, the disappearance of hexachlorophene from the skin surface was a little faster after the washings with the water of 100 ppm. of hardness were stopped than after the experiments with the 50 ppm. water. Thus, it would not appear that the formation of lime soaps or of the lime salt of 'G-11' is helpful for the retention of the bactericidal agent by the skin."

Dr. Guild points out that hexachlorophene is adsorbed by the skin. When the product "pHisoHex"* which is the detergent "pHisoderm"* plus three percent "G-11" (on a total weight basis) is used as a surgical scrub its retention on the skin may be indicated by photographing the residual emollient layer under ultra violet light. As compared with an ordinary soap wash, the emollients present (containing hexachlorophene) resist rinsing and therefore assist in holding the colloidally dispersed hexachlorophene on the skin. Although "pHisoHex" contains three percent hexachlorophene on a total weight basis (as contrasted with .25 to one percent total weight basis generally used in liquid soaps) the amount so used is justifiable and plausible because it is based on the work of Dr. C. W. Walter et al., (See T. G. Chisholk, T. L. Duncan, C. A. Hufnagel and C. W. Walter. *Surgery*, 28:5, 812-818, Nov., 1950). They showed that three percent is more efficacious than lower percentages but that amounts in excess of three percent were of no greater value.

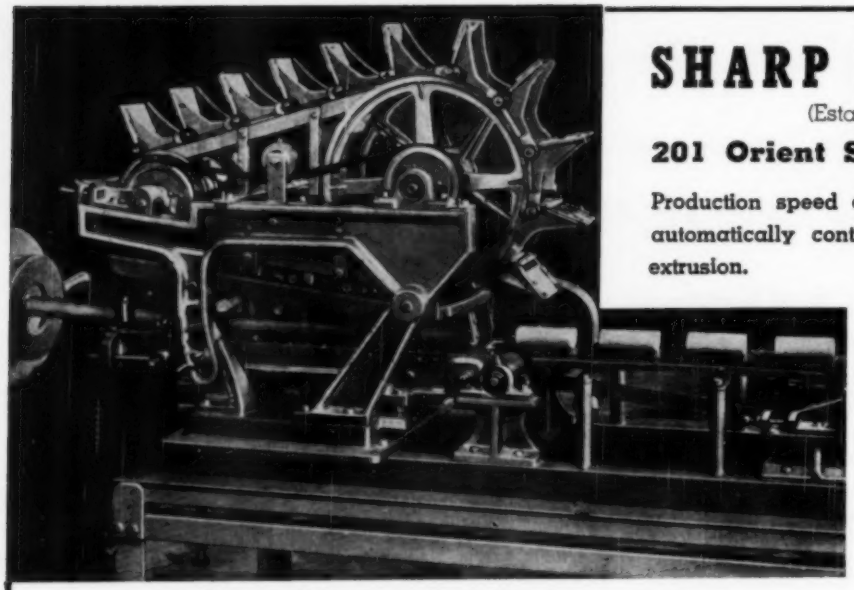
It was also pointed out by Dr. Guild that synthetic detergents without emollients would be harmful to the skin (a point on which we will agree wholeheartedly). Dr. Guild also claims that the use of a detergent having a pH value similar to the fresh buttermilk acidity of normal skin is physiologically preferable to the use of soap which always causes transient but abnormal alkalinity of the skin.

In summary, it appears that three percent of "G-11" is intentionally used in "pHisoHex" for its special effect when used as a surgical "prep." And finally, tests to date using 50 and 100 ppm. of hard water seem to indicate that retention of "G-11" on the skin is not due to the presence of lime soaps.

Dr. Guild has furnished an up-to-date bibliography on publications on "pHisoHex" and "pHisoderm" which the writer will be glad to forward on request.

** A joint project undertaken by Armour & Co., Chicago, and Sindar Corp., New York. The work was carried out by the U. S. Testing Co., Hoboken, N. J.

* Registered trade marks, Winthrop Stearns, Inc., New York.



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US

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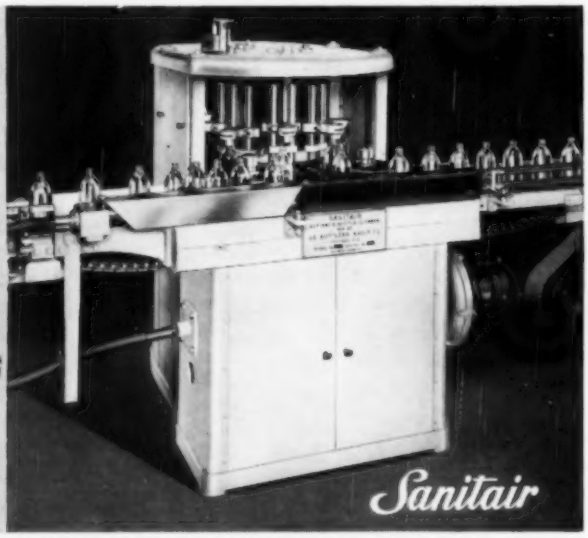

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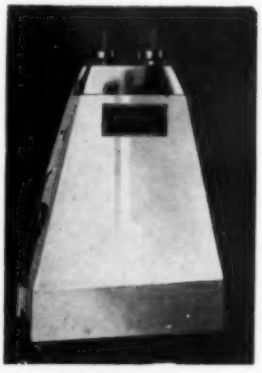

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SOAPERS should note that the American Oil Chemists' Society is continuing its work on short summer courses. A five-day course on soaps and detergents will be held at Rutgers University from July 6 to 11 and will be limited to 200. The fee is $90.00 which includes room and board for the period. This is a most worthy undertaking and is designed for those who are already in the field and wish to broaden their background.

Fat chemistry has been badly neglected in most universities, chiefly because its chemistry deals in averages and mixtures. One soap is hard and another soft because the ratio of the fatty acids vary.

The first job the writer had when he left college was that of head chemist in a plant laboratory, supervising about a dozen analysts who knew a lot more about what they were doing than he did. For many months he studied such standard works on oils and fats as Lewkowitsch, read chemical abstracts, and looked up the original papers and even went back to the laboratory in the evening to conduct experiments on fundamental phases of the work. Visiting research chemists were a mine of useful information. The writer was very fortunate in this respect since the company he was with was large and very progressive and took extreme care in encouraging and developing its men through inter and intra plant conferences, progress reports, etc.

For the isolated individual in a small company, a get-together with other individuals on a planned discussion basis should be of inestimable value both to the individual and indirectly to the company he represents.

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Sorbitol Data in Spanish

Atlas Powder Co., Wilmington, recently issued a 24 page Spanish edition of its manual on sorbitol, a polyhydric alcohol. The booklet describes the history and chemical structure of sorbitol and related Atlas polyols, and the use of sorbitol in moisture-conditioning of various products. It also concerns itself with the use of sorbitol in the manufacture of chemical derivatives such as organic and inorganic esters and polyoxyethylene or polyoxypropylene ethers. Nine charts give data on the properties of Atlas sorbitol and related polyols.

—— ♦ ——

Du Pont Advances Foulger

Dr. John H. Foulger, director of Haskell Laboratory of Industrial Toxicology, was appointed director of medical research in the employee relations department, E. I. du Pont de Nemours & Co., Wilmington announced recently. Dr. John A. Zapp, Jr., assistant director of Haskell Laboratory, has been named to succeed Dr. Foulger as director.

—— ♦ ——

Bibliography of Odors

A bibliography of odor and odor control, *Odor and the Sense of Smell,* was published recently by and is obtainable from Airkem, Inc., New York. The 294-page book 11 x 8½ inches costs $15 per copy, and is cloth bound. The book contains over four thousand references covering odor control, types of odors, anatomy and physiology of the olfactory systems of animal and insect species, pathology of odor perception, and other branches of the science of osmics. The original articles appeared in 16 languages other than English. Foreign language titles appear in English translation. The material is indexed both by authors and by subject matter.

—— ♦ ——

PAC Issues Products Data

Pittsburgh Agricultural Chemical Co., New York, Division of Pittsburgh Coke & Chemical Co., Pittsburgh, Pa., recently issued a booklet concerned with the company's pesticidal products, including BHC, DDT, the parathion, etc. One of the charts traces the production of some of the more complex organic pesticides, from the original coal.

—— ♦ ——

Redington Issues Catalog

A catalogue showing 35 types of automatic cartoning and wrapping machines and special packaging attachments is available from F. B. Redington Co., 112 South Sangamon Street, Chicago. Illustrations show in addition to the machines themselves a range of the actual packages produced.

Booklet on Silicones

Dow Corning Corp., Midland, Mich., recently published a booklet describing silicones and their various uses. The folder illustrates and describes applications of silicones in polishes, in water repellents, in hydraulic fluids, instrument fluids, dielectics, in release agents, lubricants, etc.

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New Oil Extraction Process

A new process for solvent-extraction of oil from cottonseed and other oilseeds has been developed on a pilot-plant scale at Southern Research Laboratory, according to a recent announcement by U. S. Department of Agriculture. The process, especially designed for use by small mills, is called "filtration-extraction" because it involves the use of a continuous vacuum filter as the major operating unit.

The amount of solvent required for extracting the oil is small. Conventional equipment can be used in removing solvent from the oil after extraction, a step that is necessary in all such processes.

Equipment for the oil-extraction step requires relatively little floor space. The pilot-plant filter under test at the Southern Regional Research Laboratory is only slightly larger than a family washing machine, yet it has a capacity of 24 tons of cottonseed a day. Larger installations, using standard filter units, would be possible in commercial plants.

So far solvent extraction has been particularly suitable for use on a large scale, that is, in plants processing 200 to 400 tons of seed a day. If the new filtration-extraction process developed by the Southern Regional Laboratory proves as promising in commercial tests now being planned as it has in pilot-plant operations, it could extend the use of solvent extraction considerably, particularly to small plants.

Inquiries for data concerning the process should be addressed to E. A. Gastrock, head, engineering and development division, Southern Regional Research Laboratory, U. S. Department of Agriculture, New Orleans, La.

Production Clinic

(*From Page 77*)

specialized.

Centrifugal pumps come in sizes handling from about a gallon per minute up to thousands of gallons per minute. They will pump against heads up to 500 feet, depending upon the type of impeller, power and the number of stages. Double or single suction intakes are used. While these pumps are most conveniently connected directly to a motor, belt drives, especially V belts, are frequently used.

Generally speaking, the centrifugal type pump is the most convenient to have in a sanitary chemicals plant. Centrifugal pumps are not expensive, they are economical in power consumption, compact, easily cleaned self-priming, and will pump materials in suspension, including abrasive materials. They also handle high or low density, as well as viscous fluids.

For more severe operating conditions, the rotary pump is very valuable. In pumping such heavy masses as molten soap the rotary pump is recommended. With it, more positive pressures at slower speeds are possible than with centrifugal pumps. The rotary pump is also valuable as a vacuum or compression pump. Various types of working parts are used in rotary pumps. Thus we find outswinging buckets, close-fitting sleeves, helical gears, etc. as impellers on the rotating shafts. In pumping against high pressures or in feeding filter presses it is advisable to equip the discharge line with a relief valve and by-pass. The cost of such a device is good insurance. Rotary pumps are built from small capacity up to 5000 g.p.m. against pressures of 500 p.s.i. or even greater. Their versatility enables one to handle highly viscous masses, heavy solutions like liquid caustic soda or lighter fluids such as vegetable oils. In pumping products which congeal at lower temperatures, steam jacketed pumps are available.

Reciprocating pumps are either steam or power driven. Depending upon the kind of service required either the plunger or piston type with single, duplex or triplex cylinders may be used. The steam driven pump is used extensively as a boiler feed pump in smaller steam plants. In high pressure work such as the operation of hydraulic presses, reciprocating pumps generally are used.

Diaphragm pumps are designed for use in processing such items as sludges or slurries, thick liquids, abrasive suspensions, viscous fluids, waxes, creams and pastes. Large particles of such products may be pumped without clogging. These pumps are made without any packing and thereby eliminate leakages. They will pump up to pressures of 100 p.s.i. at the rate of from three-quarters of a gallon to 100 g.p.m. Higher pressures are possible with specially constructed pumps. These pumps are economical to operate and come in direct connected, belt or variable speed drives.

When a sufficiently large quantity of a product is made and where it is economical to eliminate weighing, measuring or metering any product, a proportioning pump pays for itself quite rapidly. These pumps are best illustrated by the well-known gas station pumps, but in most cases are more accurate.

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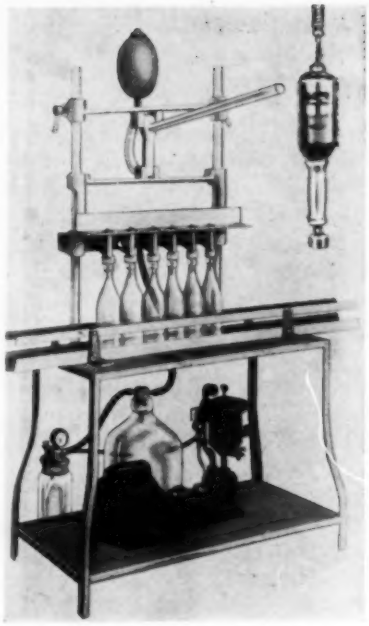
Portable Bottling Units

Two portable bottling units are now furnished together as a "package job" for assisting the bottler of moderate size to achieve volume output in a minimum of space and time, according to a recent release by Scientific Filter Co., New York. The scientific portable straight line semi-automatic vacuum filler handles a large variety of products in many different sizes of containers, both glass and tin. Vials, miniatures, petite containers of all types, shaker top bottles and all types of glass and tin containers up to quarts can be handled by this filler. Only one operator is required for maximum production. Filling spouts are adjustable and change-overs take about five minutes including clean-up time.

At the discharge end an extension is provided with sufficient length for screw capping to be performed by a second operator. The "Whirlwind" screw capper, a small, portable unit



New Scientific Portable Units

weighing about four pounds, equipped with a universal current motor, is suspended directly over the containers. The operator drops the caps on the containers and then uses the "Whirlwind" for the actual tightening operation. Aside from use on normal production runs, this combined filling and capping unit can also be used as an auxiliary line where fully automatic equipment is available but being used.

—— ♦ ——

New Sterling Catalog

Sterling Electric Motors, Inc., Los Angeles, recently announced publication of a 20-page catalog of its electric power drives. The illustrated booklet contains complete information on variable speed drives, geared motors and constant normal speed motors in drip-proof, totally enclosed, and pipe ventilated designs. Catalog is available on request.

—— ♦ ——

Rotary Filler Bulletin

A bulletin has recently been published by U. S. Bottlers Machinery Co., Chicago, illustrating the automatic container feed and automatic control mechanism now built into the U. S. rotary vacuum filler. The filler is available in six basic machine models with 14 adaptations to provide for any specific filling needs. Bulletin is available on request.

Sanitary Chemicals Section

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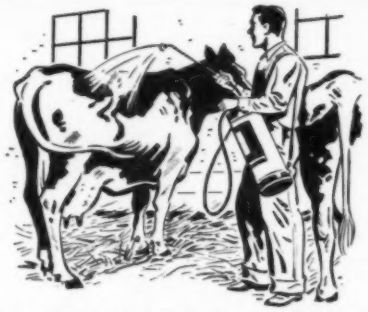
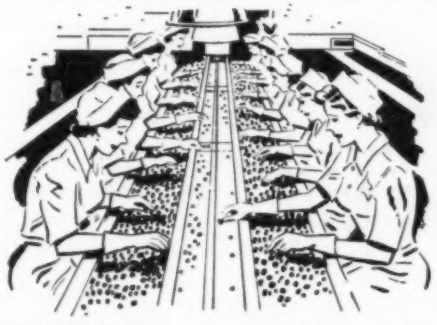


ON THE FARM — Insecticides based on Pyrenone gain in preference because of this unusual combination of important features: Pyrenone protected crops can be used as feed; Pyrenone sprays can be used in dairy premises and on dairy animals without toxic hazards; properly formulated and applied Pyrenone presents no hazard to spray operators, farm employees, animals or to milk and milk products or to grain and grain products. Yet it is effective on *all* species of flies, mosquitoes, and gnats, including hard-to-kill horseflies.

IN STORAGE — Pest control products based on Pyrenone give quick knockdown and kill of a wide range of storage insects, without problems from residues. A wide variety of Pyrenone insecticides are available — aerosols, emulsifiable sprays, dusts. In addition to Pyrenone products formulated by many manufacturers, U. S. I. also offers the agricultural chemical industry two specialized products for protection of stored grains before processing — Pyrenone* Grain Protectant and Pyrenone* Wheat Protectant.



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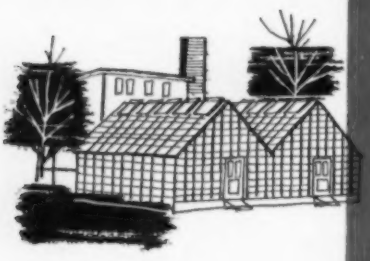

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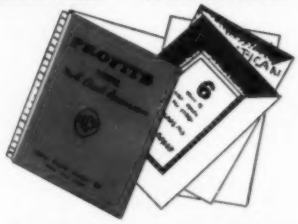

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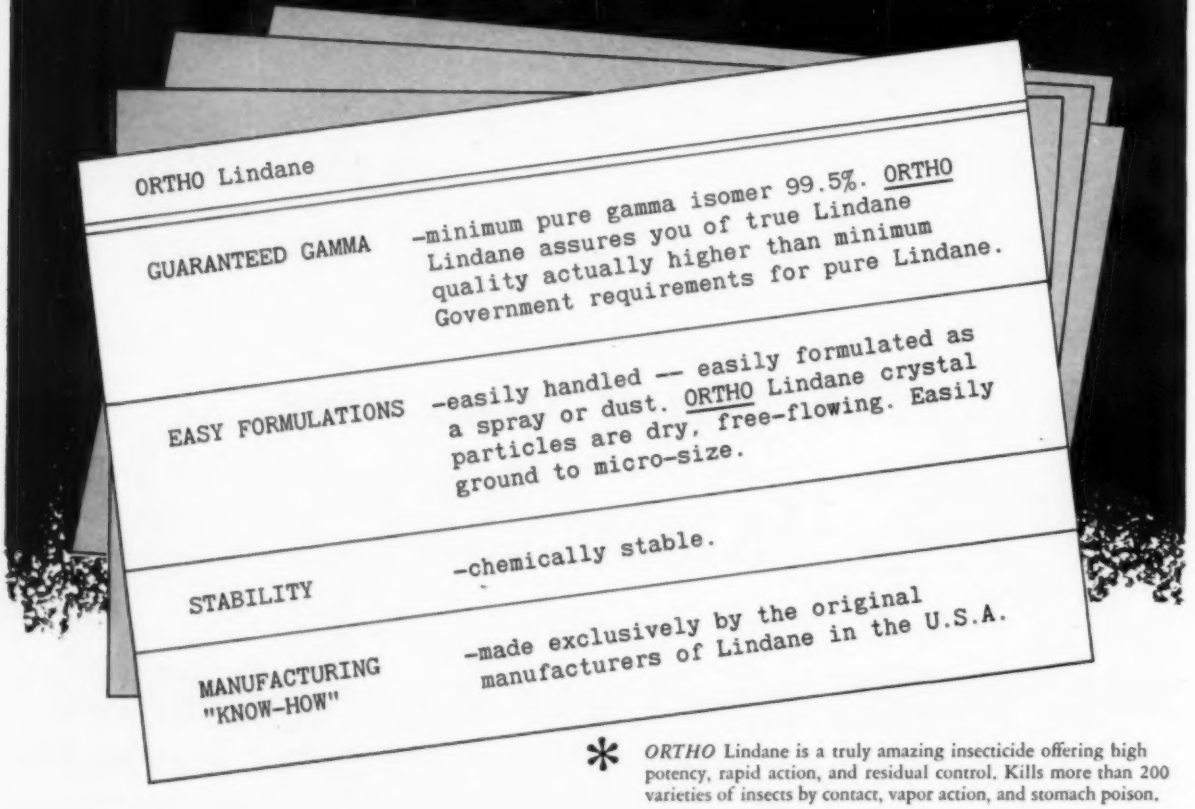
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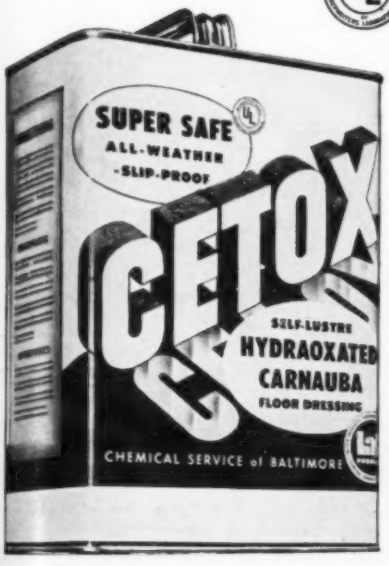

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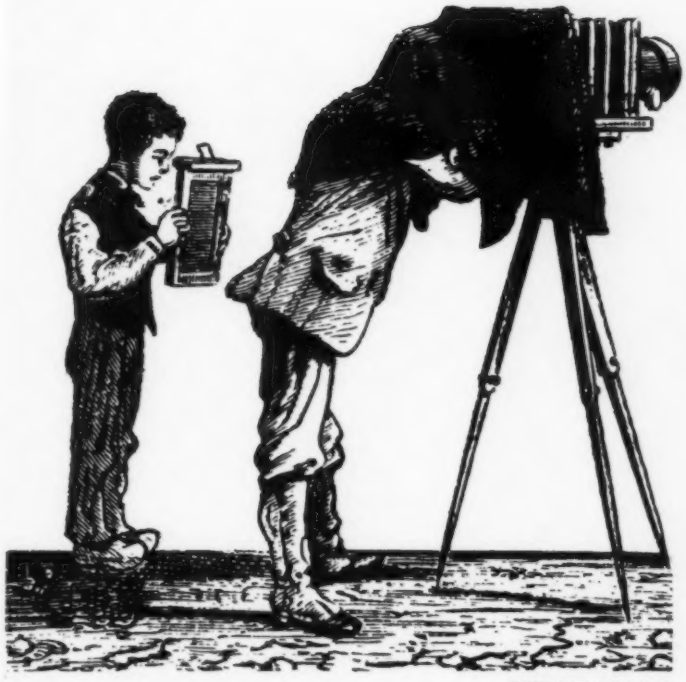

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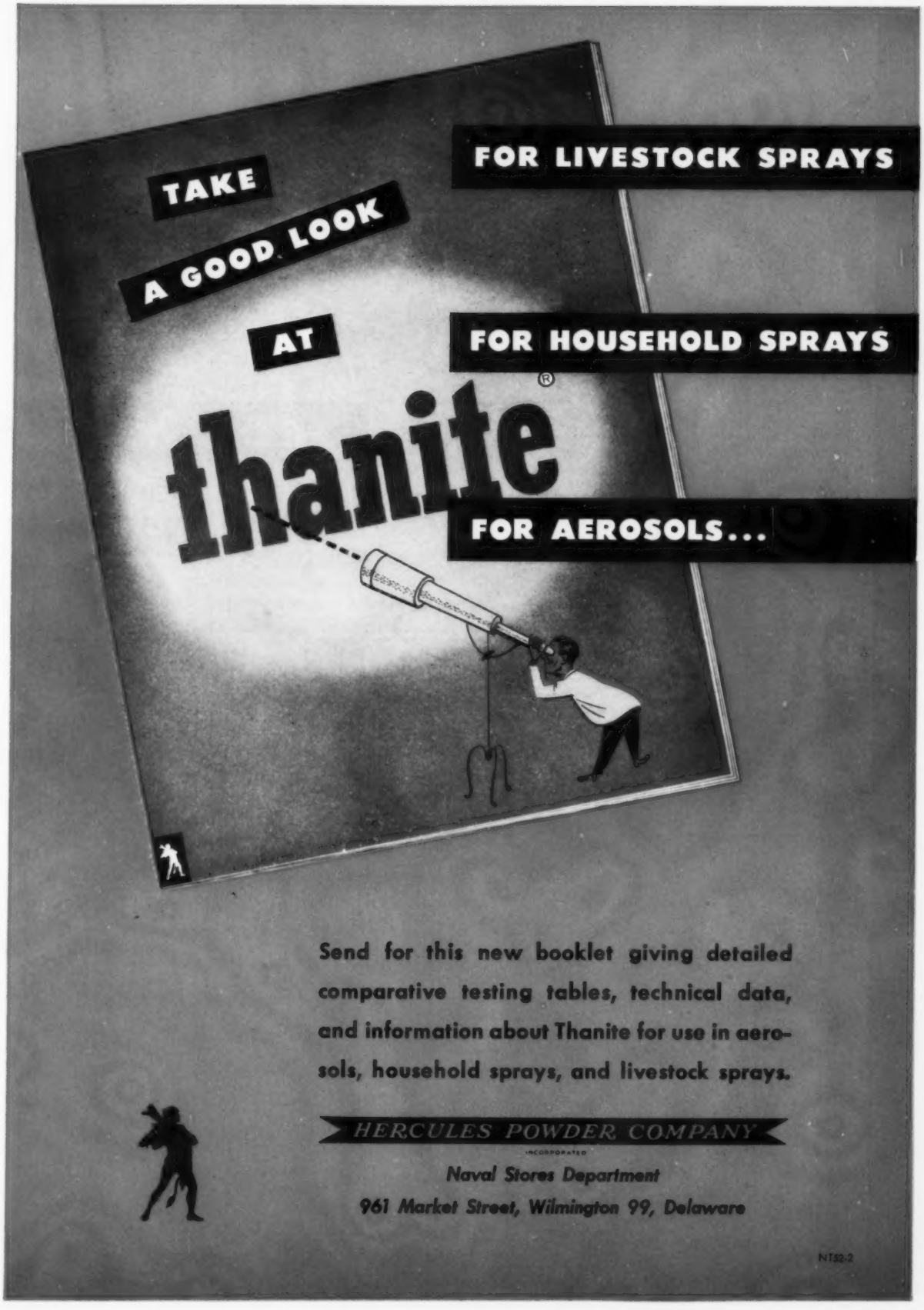
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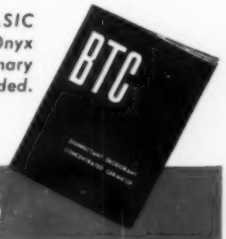

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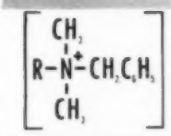

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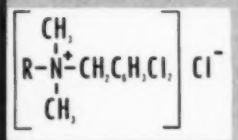

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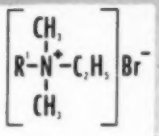

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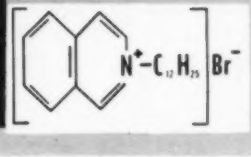

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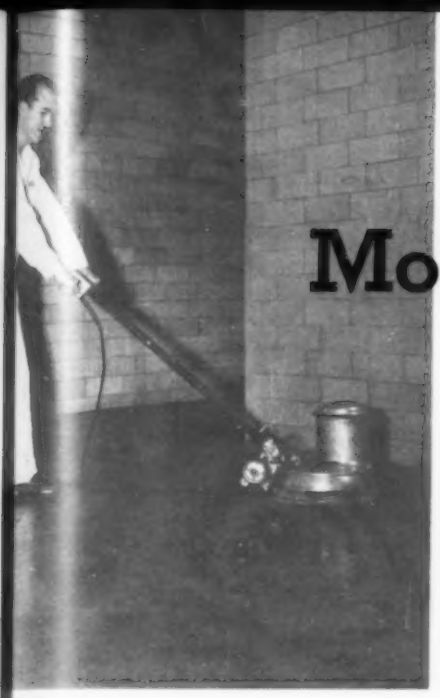

Modern Floor Polishes

By Milton A. Lesser

Newer developments in floor waxes include replacements or extenders for carnauba, improved emulsifiers and colloidal silica and silicones

FLOOR polishes have received considerable attention during recent years. This is hardly surprising since these products now occupy an established place among maintenance requisites. Not only are floor polishes of major importance among the supplies required for the maintenance of public buildings and industrial plants, but they have also become accepted as essential for the care of floors in the home.

This last is reflected in statistics on consumer preferences; figures which also show that self-polishing liquid wax is by far the leader among floor wax preparations. Thus, in the consolidated consumer analysis report (1) for 1951, covering 15 cities, it was shown that purchasers of self-polishing liquid wax ranged from a high of 85.1 per cent in Milwaukee to a comparative low of 73.8 per cent in Washington, D. C. However, data from individual cities indicate that the market has become fairly well stabilized. For example, in 1951, 81.0 per cent of all families in Indianapolis were users of liquid or self-polishing waxes. This represented only a small increase over the 1946 figure of 79.9 per cent. (2)

With such a large and fairly fixed market, competition has become very keen. One indication of this fact is provided in the 20 trade practice rules for the floor wax and floor polish industry recently proposed by the Federal Trade Commission. (3) These proposed rules are designed not only to combat unfair competition, but also to protect the consumer from unwarranted claims and inferior products. However, many manufacturers are retaining their customers through a program of research that has led to both reduced costs and better polishes.

Factors in Making Waxes

MANY of the factors which must be taken into consideration when formulating or improving a floor wax polish are cited by Warth, (4) as follows: (a) Odor, appearance and color, (b) degree of luster obtainable after application, (c) wearing quality of the wax foundation, (d) condition of material and container after prolonged storage, (e) consistency of the material relative to its removal from the container, (f) ease of application, (g) drying time after application, (h) flexibility of polish film, (i) freedom from water-spotting, (j) washability with soap or mild detergent, (k) marproofness to light scratching, (l) freedom from slippage, (m) coverage per pound, and (n) manufacturing cost.

While all of these factors have received or are getting attention, particular interest has been focused on the factor of safety, as indicated by slippage. Methods and equipment for measuring slipperiness have been developed by workers at the National Bureau of Standards (5) and in other laboratories. (6) These provide information on the relative slipperiness of various flooring materials, floor finishes and floor polishes. They also provide a means for evaluating the several materials that have been suggested for inclusion in floor polishes to minimize slips and falls.

Shellac and other resins, both natural and synthetic, are extensively used to impart slip-resistance and other desirable properties to floor polishes. (7) Among newer materials developed for this purpose is a special colloidal silica preparation which is said (8) to give high skid resistance and to impart increased gloss and decreased tackiness to floor waxes. The patent literature (9) also offers descriptions of new mixtures to increase the frictional coefficient of floor wax coatings.

Gloss of Waxes

A HIGH gloss, which many consider to be characteristic of quality products, has also been the subject of investigation. (10) Although some rather elaborate equipment has been devised to evaluate this characteristic, Weirich (11) feels that there generally is no justification for placing undue emphasis on the fact that one wax looks a trifle shinier than another on first application. As far as gloss is concerned, he believes that a wax may be classed as acceptable or

unacceptable. He has found that most acceptable waxes have a gloss that will level out within a close range under wear, traffic and buffing.

Of course there are circumstances where a high gloss, or luster is not desirable. According to a European patent (12) a dull or matt effect can be obtained by incorporating metallic soaps in floor-polishing waxes. It is suggested that a product of this sort can be made from:

	Parts
Barium stearate	20
Wax	4
Turpentine	76

In addition to slip resistance and gloss, a well formulated wax polish should provide films with good wearing ability, low tack and high water resistance. Stability on prolonged storage under varying conditions is also an essential characteristic. This is especially important in the case of emulsion products, which must also spread and level properly when applied to floors.

In many instances, these and other desirable properties are being imparted to floor polishes, and the cost factor is being met, through the use of new and often better raw materials. Although carnauba remains the most important wax in floor polish formulations, especially products of the emulsion type, other waxes may be emulsified and various other vegetable or mineral waxes or combinations of such waxes may be used advantageously in polish formulations. In addition, synthetic resins have also been used in place of part of the wax in some preparations.

More (13), for example, notes that synthetic resins and oxidized microcrystalline waxes have almost entirely replaced shellac and carnauba wax in some of the cheaper brands of water-base, no-buffing, wax type floor polishes. Such materials have similary found extensive use in some of the better known products. He also points out that synthetic waxes, new waxes of petroleum origin, and montan wax derivatives are beng used more extensively in wax base products. Sometimes they help to reduce costs, but in many cases it has been found that these waxes are superior to the natural products for specific applications.

Carnauba Replacements

BECAUSE of its high cost and variations in chemical and physical properties, as well as its importance in polish formulations, much effort has gone into the development of partial or total replacements for carnauba wax. (14, 15, 16) In discussing such materials, Kroner (17) comments on the properties that make carnauba so valuable and at the same time indicates the characteristics that the substitutes must match. The valuable properties of carnauba, says he, are gloss, hardness and the fact that it can be dissolved in solvents for paste floor waxes. In addition, carnauba can be saponified for making self-polishing, water-emulsion floor waxes. Taking the major share of carnauba wax, these so-called "no-rubbing" waxes produce a glossy, hard and lasting film. According to this authority, possible carnauba substitutes include refined ouricury wax, refined candelilla wax, refined sugar cane wax, various synthetic waxes, oxidized microcrystalline paraffin waxes, and composition or blended waxes. The synthetic, microcrystalline, and composition waxes are available commercially under various brand names.

Carnauba and its extenders or substitutes, as well as other modifying waxes, are used in the manufacture of the various basic types of floor polishes. In general, wax floor polishes may be divided into three main classes. The first comprises floor waxes made essentially of blended waxes dissolved in volatile organic solvents, and provided as pastes or liquids. Second are the solvent-type, liquid floor waxes, made with a small amount of resin. Third, and most important, are the water emulsion floor waxes.

Paste Waxes

ACCORDING to the proposed revision (18) of the Federal Specification (P-W-158), a product of the first class should be free from rosin and should not be so highly colored as to stain the surface. After application, the product should dry within 45 minutes to a semi-transparent, non-tacky film that shows no signs of whiteness. The dry film should polish easily to a hard, lustrous, flexible surface.

Further details on these floor waxes are provided in the standards for the liquid and paste types. Thus, a paste product of this class should be a semi-solid material at 20 to 22°C. It should be a smooth and free from hard particles and granules and there should be no separation of liquid from the paste. The non-volatile portion, with a minimum softening point of 71°C., should comprise not less than 20 per cent by weight of the paste. The vehicle should consist of turpentine or volatile petroleum distillates or their mixtures. The flash point of the solvent should be not less than 28°C.

Paste wax polishes are frequently used with power equipment and where a thicker coating is desired in one application. Various solvents may be used in making such a polish, the choice depending on such factors as cost, availability, odor and volatility. Wood (19), in England, speaks highly of petroleum white spirit. He points out that it is relatively cheap, evaporates without residue and has sufficient solvent powers to produce a good smooth-textured wax paste. Various other solvents, like naphtha and Stoddard's solvent find application in paste formulations. New hydrocarbon solvents that are particularly suitable for making paste polishes have been described in the recent patent literature (20).

Wood also notes that the quantity of wax which a paste polish must contain is a highly controversial point. He has found, however, that the average commercial product has a wax content of about 30 per cent. Warth (4), who set the proportion of solid waxes at 31 per cent, points out that carnauba wax or its equivalent furnishes luster and hardness, while softer waxes such as paraffin, ceresin or bleached montan waxes give the paste its consistency and solvent retention. Thus, says he, a formula for a paste floor wax may consist of:

The discovery that carnauba wax could be emulsified to give a system that would dry to a lustrous film has led to many improvements in the production of emulsion floor waxes. Self-polishing liquid waxes are now leading sellers among floor wax preparations.

	Parts
Carnauba wax	12
Montan wax, bleached	5
Ceresin wax, hard	3
Paraffin wax	11
Mineral spirits	60
Turpentine	9

The usefulness of synthetic waxes in floor polish pastes is indicated in the following formula which is cited by Vallance (21) as giving a "very good" product.

	Parts
Synthetic wax (m.p. 74-78° C)	3
Carnauba wax, fatty grey	3
Beeswax	12
Paraffin wax	12
White spirit	70

Vallance also presents the following formula to illustrate the fact that a good standardized grade of candelilla wax can give results nearly equivalent to those of carnauba:

Candelilla wax	10
Beeswax, yellow	3
Paraffin wax	0
Calcium stearate	1
Pine oil, steam distilled	1
White spirit	65

He points out that the purpose of the calcium stearate is to aid in retaining the solvent and, to some extent, to increase the viscosity and reduce slip. Aluminum, zinc and other metallic stearates may likewise be used.

More specialized products may be supplied as wax pastes or liquids. For example a British patent (22) describes a wax polish for use on asphaltic floors as consisting of one part of beeswax with from two to five parts of carbon tetrachloride.

In many cases, a formula for a paste type polish can be converted to a liquid product by increasing the proportion of solvent. This is illustrated in a formula cited in a publication issued by the National Bureau of Standards. (23) Here it is stated that a paste floor wax can be made from:

	Parts
Carnauba wax	2
Ceresin wax	2
Turpentine	3
Volatile mineral spirits	3

By increasing the amounts of turpentine and mineral spirits, for example, to a combined total of about 12 to 15 parts, a more fluid or liquid wax may be obtained.

Liquid Floor Waxes

WARTH (4) similarly observes that liquid floor waxes have the same foundation base as the paste floor waxes, but contain much more solvent, so that the wax or non-volatile constituents may comprise only eight to 15 per cent of the polish. It is common practice, in making the liquid products, to use less volatile spirits, solvents of this type being available for making liquid polishes. According to this authority, a paste floor wax can be converted into a liquid wax by adding such prepared solvents.

The proposed Federal Specification for a liquid type of wax polish calls for a smooth, heavy-bodied liquid mixture of suitable consistency to permit freedom of application at 20 to 25°C. There must be at least 11 per cent by weight of non-volatile matter or total solids in the polish and there should be no appreciable settling of the suspended material.

Of course, carnauba wax substitutes or extenders may also be used in the formulation of the liquid type floor waxes. Several illustrative examples of such replacements are offered in the manufacturers' and patent literature. From the latter source (24) comes the following indicative formula for a liquid or solution type of floor polish:

	Parts
Carnauba substitute (ortho-stearamidobiphenyl)	2
Beeswax	2
Paraffin	2
Mineral spirits	94

Solvent-Type Liquid Wax

IN A SENSE, the second class of floor polishes may be considered as modifications of the liquid type floor waxes. Actually, as can be seen from Federal Specification P-W-134, the two types of products have many characteristics in common. Thus, according to this specification for Solvent-Type Liquid Floor Wax (with resins), the product should consist essentially of blended waxes with small amounts of resins in a volatile organic solvent. Containing no less than 11 per cent of non-volatile matter (or total solids), the product should be a heavy-bodied liquid mixture of sufficient fluidity to permit freedom of application at 20 to 25°C.

Resin additions may also be made to paste type wax polishes, presumably to provide a harder finish and lessen slipperiness. A product of this kind (25), containing ester gum (a synthetic resin prepared by reacting glycerine with rosin) is made from:

	Parts
Carnauba wax, yellow	6 lbs.
Ceresin wax, white	25 lbs.
Paraffin wax	15 lbs.
Ester gum	3½ lbs.
Solvent	14½ gals.

Self-Polishing Waxes

OF KINDRED interest are recently developed self-polishing floor wax compositions. According to the patent (26), a non-aqueous, quick-drying product with a high coefficient of friction may consist of a chlorinated paraffin wax, a resin, and a solvent-releasing agent in a high-flash carbon naphtha solvent. A suitable resin may be selected from the group consisting of a polystyrene, a polybutyl methacrylate and a polyisobutyl methacrylate.

Of course the term "self-polishing" is usually associated with the third class of products—the emulsion or non-rubbing types of floor

polishes. Since such products dominate the field, a good deal of work has gone into the establishment of standards for them. In his discussion of wax emulsion polishes, Weirich (11) calls attention to he fact that the current specifications (784A, March 27, 1950) of the General Services Administration lists 21 different characteristics which must be measured for compliance. The properties discussed in this specification include total solids, volatile solvents, free oil, pH, free caustic, viscosity, specular reflectance, drying time, film characteristics, sediment, stability to heat and to freezing, spreading, recoating, adhesion, tackiness, wet abrasion, removability, water spotting, buffing quality, odor and slip resistance.

From a composition standpoint, it is required (27) that the non-volatile matter or total solids content shall not be less than 12 per cent, of which the wax content must be at least 65 per cent. The softening point of the wax should not be less than 80°C. In addition, the water emulsion floor wax must be free from petroleum distillate and other volatile organic solvents. The distillate should consist of not less than 99 per cent water.

When considering the performance of water emulsion floor waxes, it is desirable (18) that the product shall dry to a non-tacky, lustrous finish without rubbing, buffing or polishing. The resulting film should adhere firmly to the surface without checking, cracking or peeling and it should be transparent and practically odorless. The floor wax should be suitable for use on sealed floors and resilient floors of all kinds. The product should be stable, aqueous colloidal emulsion of waxes without objectionable odor. The emulsion should be a free-flowing fluid that can be applied readily with a suitable applicator such as lamb's wool, cotton cloth, or a mop to spread easily and uniformly. Since levelling and spreading are important properties, it is also desirable that the water emulsion floor wax shall dry with a smooth, uniform glossy film, with no tendency to pull up in ridges or puddles (27).

Since the discovery that carnauba wax could be emulsified to give a system that would dry to a lustrous film, many improvements have been made in the production of emulsion floor waxes. This is reflected in the many formulas developed during recent years and made available in both the technical literature and the publications of raw materials manufacturers.

Emulsifiers for Wax

IN DEVELOPING these formulas, which range from the simple to the quite complex, workers have given consideration not only to the waxes, but have studied the emulsifiers as well. For example, Eaton and Hughes (28) have made a comprehensive study of the amine emulsifiers which are extensively used for the preparation of carnauba wax emulsions. Triethanolamine, a member of this group, has a well established place in the preparation of emulsion type floor polishes, and many formulas are available to illustrate its use. Typical is the wax emulsion recently given by Figliolino (29) as follows:

	Parts
Carnauba wax, No. 1 or 2	50.0
Oleic acid	5.2
Triethanolamine	10.4
Potassium hydroxide (85%)	0.6
Water, boiling	382.0

Mixing is preferably done in a steam-jacketed kettle having a low speed mixer. The wax, oleic acid and triethanolamine are melted and kept at a minimum of 95°C. Dissolve the potassium hydroxide in two to three parts of boiling water and add, with stirring, to the melted wax mixture. When clear, add the water slowly, allowing the mixture to become clear and viscous. If increased water resistance is desired, 15 to 20 parts of ammonia (28°Be.) may be substituted for the potassium hydroxide.

Morpholine, another member of this emulsified group, has the reputation of imparting a high degree of water resistance to polishes made with it. An example of its use is offered in the following formula (30-31):

	Parts
Carnauba wax	40
Oleic acid	8
Morpholine	5
Water	240

Melt the wax in the oleic acid, mix well and maintain at 95°C. Add the morpholine with stirring. When the mass becomes clear, add about 20 parts of water (boiling) and continue stirring until a clear, viscous mixture is obtained. Add the remainder of the water, with constant stirring. Cover the polish and stir at intervals until cool.

Other emulsifiers have been introduced during recent years and some offer certain advantages of their own. For example, the following formula shows how the employment of a hydrogenated tallow amide ("Ethomid HT/25", Armour Chemical Division, Chicago, Ill.) permits the preparation of carnauba wax emulsions by a simple, relatively rapid, one-kettle process:

Carnauba wax	10%
Hydrogenated tallow amide	3%
Water	87%

The wax, emulsifier and one-quarter of the water are placed in a kettle and heated until the wax has completely melted. Continue agitation until uniform mixing occurs. Add the remainder of the water (cool) and after uniform mixing no further processing is required.

Carnauba Extenders

AS PREVIOUSLY noted, replacements and extenders for carnauba wax are finding their way, more and more, into the production of the emulsion type floor polishes. Considerable information, most of it very dependable, is available from the manufacturers of such materials. Prominent among these products are the oxidized microcrystalline waxes which produce a good gloss and give anti-slip properties to the wax film (17). Shown to be satisfactory as extenders for carnauba in the manufacture of emulsion floor polishes, these oxidized waxes are characterized by their ease of emulsifiability, compatibility with other waxes and resins, high gloss, good spreading properties and freedom from tack (32). A typical emulsion polish formula employing such a wax is as follows:

	Parts
Carnauba wax	15.5
Candelilla wax	31.0

(*Turn to Page* 131)

Action of Germicides

By S. Boyk, Ph.D.*
Ottawa Chemical Co.

THIS report is not concerned with a new question, but rather a very old one, and one that has been plaguing those interested in the field for a good many years. Two principal questions will be raised and discussed. The first, how does a chemical kill a micro-organism, and the second, how does the medium affect the action of the chemical. Perhaps the two questions are really one. That being the case, how do a solvent medium, a germicidal agent and a micro-organism interact so that the end result is the death of the micro-organism.

We shall consider this problem by first making a summary of some of the important known facts, proposing a hypothesis to correlate these facts, showing how these facts fit into the hypothesis, and last, testing the hypothesis by its utility in predicting new phenomena. Let it be understood clearly at the outset that this proposed hypothesis is by no means imagined to be the last word on the subject, but rather an attempt to organize a mass of apparently unrelated data into a semblance of order. If the hypothesis serves to clarify a situation, it will have served its purpose. If it provides a stepping-stone for its own overthrow and replacement by a superior hypothesis,—again it will have served a purpose.

In the consideration of some of the facts on germicides, our attention will primarily be focused on the phenols, not because they are the only germicides, or because of their supposed superiority to others, but because they have been known for the longest time and have a tremendous background of published research.

Substituted Phenols. — Phenol itself is a very potent germicide, and forms the basis of comparison with other germicides. We readily accept that cresol is more potent than phenol, and xylenol more potent than cresol. We all also know that chlorinated phenol is more potent than phenol itself, and that chlorinated alkyl phenols are more potent than the unchlorinated compounds. Table No. 2 shows the phenol coefficients of a variety of these products.

Salts.—It has been known for a long time, as published by Kronig & Paul, (2), that the addition of various salts increases the antiseptic action of phenol. They further noted that all salts did not increase this effect to the same degree.

Solvent.—On some germicides mentioned in the above paragraph, Kronig & Paul mention that alcoholic solutions of phenol are less effective than aqueous solutions. This same phenomenon was noticed and left unexplained by C. M. Suter (3), and Englehardt (1), who studied the effect of a variety of solvents and were unable to come to a conclusion.

That the hydroxyl ion *per se* is a potent germicidal agent has been known for a long time. Also well known is the fact that the sodium and other alkali metal salts of the phenols are less effective germicides than the free phenols.

Soap.—Various soaps have been known to have germicidal effect and it has also been known that the variation of the germicidal effect of an unsubstituted soap depends upon its chain length. Ricinoleic acid soaps are much more effective carriers for phenols than are soaps of acids such as oleic and stearic.

Neutralization.—A great deal of the recent work on germicides has been concerned with "neutralizing agents". It has been shown that bacteriostasis brought about by mercurials many times can be voided by organic compounds containing the sulphydryl group. Protein in the form of serum, whole blood, or even albumen can greatly cut down the phenol coefficient of a germicide. Not only can a protein do this, but it has also been shown that activated carbon can also decrease the effectiveness of the germicide.

The above facts are probably not new, nor has there been a lack of hypotheses to account for one or two of them. We feel that the group may be explained by the following hypothesis:

The killing of a micro-organism is the result of a chemical reaction between the germicide and the protein in the micro-organism. Lethal action may be described as an adsorption of the lethal agent by the protein of a microbe, followed by an irreversible reaction, in which the protein is permanently altered. These ideas can perhaps be illustrated in the symbolic equations of Fig. 1. In reaction (1) there is a reversible union between the

* Paper presented at 38th Annual Meeting Chemical Specialties Manufacturers Assn., Washington, D. C., Dec. 4, 1951.

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agent A, and the microbe M. This is followed by an irreversible action (2), in which the agent-microbe complex undergoes an irreversible change resulting in the death of the microbe.

Examining reaction (1), what is the nature of the union between A and M? Probably this is an adsorbtive phenomenon of the protein of the microbe and has as its active centers the free amino groups which are present in all protein. The equilibrium will be shifted to the right by all the factors of the classical Le Chetalier principle as effect such an equilibrium. This, then, is the adsorption of a compound present in low concentration on the surface of a colloid. We are all sufficiently sophisticated to realize that adsorption is not a magical process, but rather one which involves stronger or weaker chemical bonds, and which obeys some well known physical laws.

Now consider reaction No. 2, the exact nature of which is unknown. We can say that it partakes of the characteristics of the usual irreversible reaction, and as temperature is increased it proceeds more rapidly.

Illustration of Hypothesis

THE hypothesis summarized above can be best illustrated by showing how it can tie together the facts described earlier. In the data given in Table No. 2 you will note that in the group of alkyl phenols the phenol coefficient follows the boiling point. The same is true for the chloro alkyl phenols. If in reaction No. 1 the equilibrium reaction is primarily an adsorptive phenomenon, then other things being equal, those substances which are most readily condensed should be adsorbed to the greatest degree. It is well known that, from a physical-chemical point of view, adsorption is very closely related to the condensation of a vapor. The energy change involved in the condensation of a vapor is called the heat of condensation and, similarly, the energy involved in adsorption is called the heat of adsorption. While the heat of adsorption of a phenol on protein would be extremely difficult, if not impossible to measure, by use of anology, we can obtain data which might be useful. Trouton's rule teaches us that for a great many materials the heat of vaporization is proportional to the boiling point. We can then note from this that, in the case of very closely related substances, the higher the boiling point, the greater the heat of adsorption; hence the greater the phenol coefficient.

(1) $A + M \rightleftharpoons AM$

(2) $AM \rightarrow \underline{AM}$

M-MICROBE

A-ACTIVE PRINCIPAL

FIG 1

In fact, in a general sort of way we can say that the gremicidal potency of similar materials is related as is their thermodynamic activity in solution. The quaternary ammonium compounds act in a way similar to the phenols. The phenols have an active hydroxy group which is the focus of adsorption, the quaternary ammonium compounds have a highly polar nitrogen atom which fulfills the same function. The greater the molecular weight of a material, the more readily it is adsorbed from a solution, and so it is not surprising that the quaternary ammonium compounds are all materials of a very large molecular weight. In the quaternaries the ether linkages probably serve the function of permitting the molecular weight to be built up without at the same time producing too little solubility.

Salt—The thermodynamic activity of a given material dissolved in a solution is increased as its concentration in the solvent is increased. Salts dissolved in water always bind a certain amount of water in the hydration of the various ions. It is not at all surprising then that a salt, by combining with water, increases the activity of the phenolic material in water, and hence increases its apparent phenol coefficient.

Solvent—Many people have noted that alcohol can depress the

TABLE 1 THE EFFECT OF ALKYL GROUPS ON THE PHENOL COEFF OF CHLOROPHENOL

MATERIAL	PHENOL COEFF. E TYPH	MATERIAL	PHENOL COEFF. E TYPH
	4		46
	30		81
	64		29
	133		
	103		
	43		
	27		

TABLE 2 RELATIONSHIP OF BOILING POINT & PHENOL COEFFICIENT

MATERIALS	BOILING POINT	PHENOL COEF E. TYPH.
p-METHYL-o-CHLORO PHENOL	195-6°C	6.3
p-ETHYL "	214-6	17.2
p-n-PROPYL "	228-30	37.5
p-n-BUTYL "	247-88	86.7
PHENOL	190	1.0
CRESOL	200	2.4
XYLENOL	220	5.0

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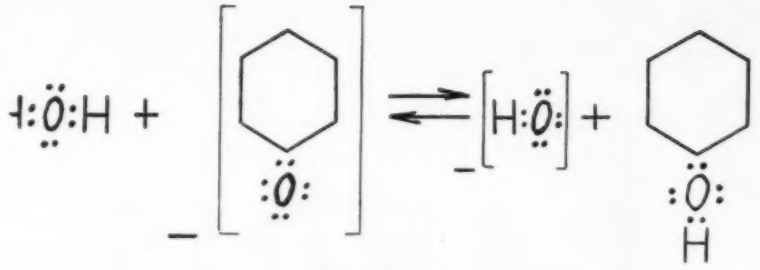


FIGURE 2

antiseptic action of phenols. Among these are Kronig & Paul, cited above, and C. M. Suter. Some of our own unpublished work also bears this out. Alcohol, being an excellent solvent for phenols, in increasing their solubility, would be expected to decrease their thermodynamic activity, and hence their apparent phenol coefficient. What probably takes place is a hydrogen bonding between the hydroxyl group on the phenol and the similar group of the alcohol.

Hydroxyl Ion—If the adsorbtive step in the germicidal action of a phenol is a loose molecular binding of the hydroxyl on the phenol, with some polar part of the protein molecule, then in the presence of any base a higher hydroxyl ion concentration is obtained and the equilibrium shown in Figure 2 is shifted to the right. In this case, the concentration of free phenol has been decreased at the same time that its activity has been lowered. Any substance which dissolves in water usually does so by virtue of reacting with the water to form a hydrate. This holds true for phenols, of course, as well as for other materials. The activity of a phenol has to be pictured as being a shift in the bonding of the hydroxyl ion from being bound to water to being bound to the cell protein. The germicidal action of the hydroxyl ion itself in high concentrations is probably at least in part caused by the reaction of that ion with the cell protein.

Soap—A soap, of itself, consists of a hydrophyllic part and a hydrophobic part. The polar end of the molecule is capable of being adsorbed on the surface of the protein. The germicidal action of the soap is brought into play when this soap-protein complex is relatively stable. If the soap chain is very short, the soap is quite soluble and does not have a great tendency to plate out. If the soap chain is very long, there is a very strong tendency for it to become entangled among the hydrophobic groups and the formation of stable micelles. At a chain length of around twelve carbon atoms, an optimum is reached as far as these tendencies are concerned, and maximum germicidal potency for the soaps is about twelve carbon atoms.

When the phenol is dissolved in a soap, its acitvity will be decreased if the soap exerts a very great solubilizing effect on it or if the soap forms a colloid which has a great deal of surface available for adsorption of the phenol. In order that the phenol be effective in the presence of soap micelles, it must be adsorbed preferentially by the cell protein. In the solution there is a competition between the microbes and the soap colloid. In such a sensitive system it is very difficult to predict which will win. One can predict though, that a soap such as sodium ricinoleate will not inhibit the action of a phenolic because of its own very weak tendencies to form micelles (Table 3). Were the alkyl-aryl sulphonates to be studied carefully from point of view of chain length it is very likely that a maximum germicidal effect would be found and a decreasing effect observed as the chain was lengthened.

Neutralizing Agents — The mode of action of neutralizing agents can be explained readily by saying that in all cases they shift equilibrium (1) Figure 1 to the left. If the neutralizing agent is a protein, it is obvious that its mode of action is that of an adsorbant for the germicide in the solution, which lowers the concentration of the germicide, which tends to decompose the AM complex. One may think that the microbe in the AM complex is in a state which corresponds to bacteriostasis. Any other effective adsorbant should do the same thing. Of course, in a quantitative way, one would have to study the surface area of the protein of the microbe, the surface area of the adsorbant, and the relative energies of adsorption on these two substrates.

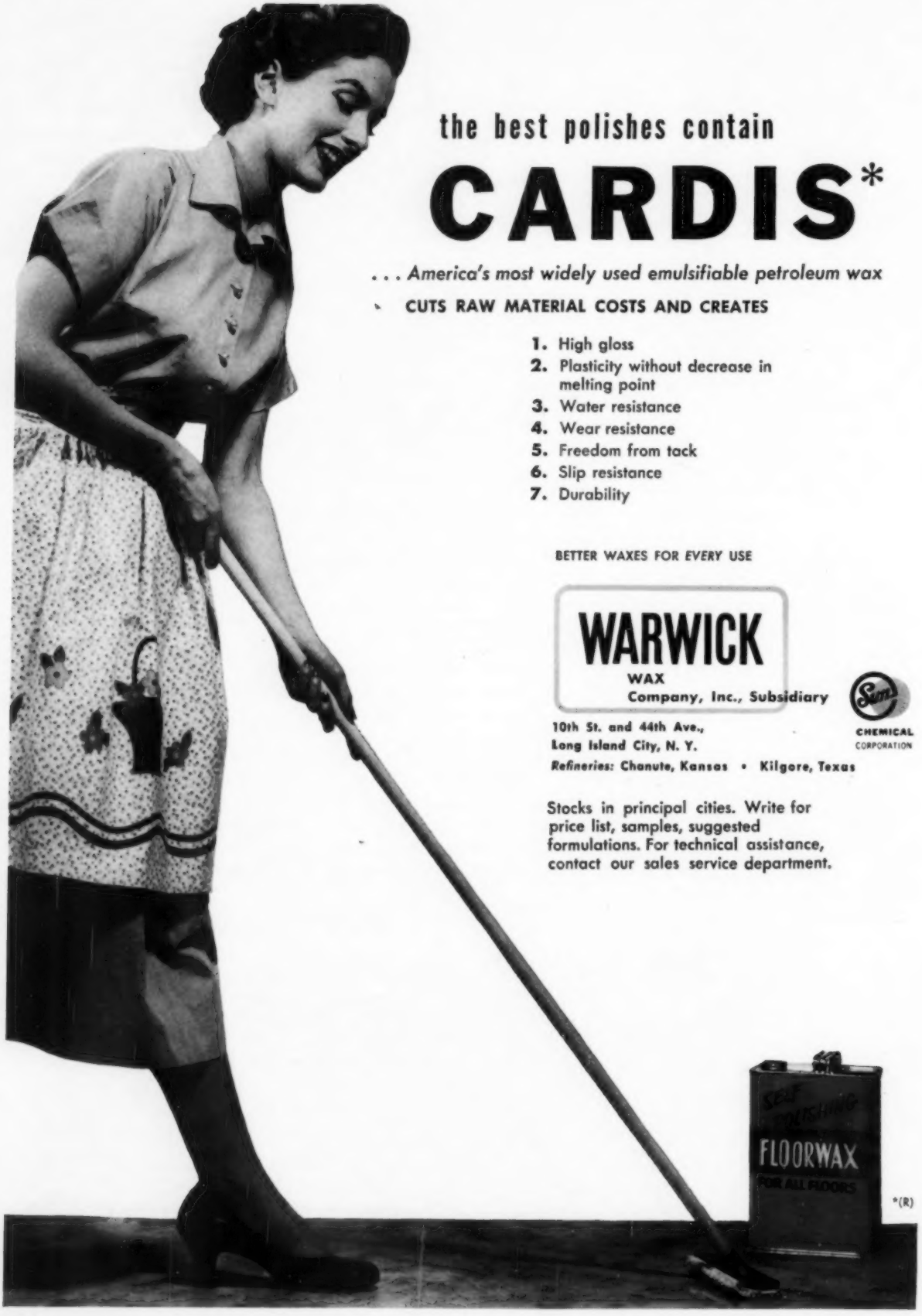
It has been well known that the presence of protein such as serum, whole blood, albumen or any other will lower the apparent phenol coefficient of phenolics. This well known observation fits very nicely into the ideas above.

When the chemicals are used

TABLE 3. PHENOL COEFFICIENTS IN SODIUM HYDROXIDE AND SODIUM RICINOLEATE

	Material	*Phenol Coef. E. Typh.*
1.	p-CHLORO-m-XYLENOL in SODIUM HYDROXIDE 1.0 gm PCMX 0.32 gm NaOH plus water to 100cc	5.7 RW
2.	p-CHLORO-m-XYLENOL in SODIUM RICINOLEATE 0.5 gm PCMX 5 gm soap plus water to 100cc	62.0 RW
3.	p-CHLORO-m-CRESOL in SODIUM HYDROXIDE 1.0 gm PCMC 0.176 gm NaOH plus water to 100cc	8.1 RW
4.	p-CHLORO-m-CRESOL in SODIUM RICINOLEATE	
a.	0.5 gm PCMC 1.0 gm soap plus water to 100cc	25 RW
b.	0.5 gm PCMC 5.0 gm soap plus water to 100cc	20 RW
5.	CHLOROALKYL* in SODIUM HYDROXIDE 1.0 gm material 1.0 gm NaOH plus water to 100cc	133 FDA
6.	CHLOROALKYL* in SODIUM RICINOLEATE 1.0 gm material 3.4 gm soap plus water to 100cc	244 FDA

* 2-Tertiarybutyl-4-chloro-5-methylphenol manufactured by Ottawa Chemical Co., Toledo, O., under the trade name "Ottafect."



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as neutralizing agents, they are usually effective by virtue of precipitating the germicidal material or in tying it up in a stable complex. Regardless of the exact mechanism, the net result is that the concentration of the germicide in the solution is lowered and the equilibrium is shifted again to the left.

If this hypothesis is to be of value it should enable us to predict new phenomena. The inhibition of phenolics by protein and serum has been known for a long time. Perhaps the most prevalent hypothesis is that the protein forms a protective layer around the micelle and thus keeps the phenol at a distance. Our hypothesis visualizes, rather, a competition between the micellar and the added protein for the germicide. According to this, if the germicide were added to the culture of bacteria in an amount just enough to give bacteriostasis, one would expect a subsequent addition of protein to neutralize the germicide and revive the bacteria. If the older hypothesis is correct, one would expect this protein to form a film around the micelle and keep the germicide in intimate contact with it. Thus one would not expect to revitalize the micro-organism. The same effect might be expected in varying degrees by any of the other techniques of lowering the activity of the germicide. It should then be possible hypothetically to take bacteria under bacteriostatic conditions and, by raising the pH, or adding a small amount of soap (of the type which forms micelles), or adding alcohol, to change the system over into one in which bacteria could grow.

References

1. Engelhardt, W. E. On the Antiseptic Action of Phenol and P-Chlorophenol in Solvents of Different Dielectric Constant. *B: ochem Zentralblat 190,* 217, (1927)
2. Kronig, B. Paul T. The Chemical Basis of the Doctrine of Toxic Action and Disinfection.
3. Suter, C. M. Relationships Between the Structures and Bactericidal Properties of Phenols. *Chem. Rev.* 28, 269 (1941)
4. VonOettingen, W. F. Phenol and its Derivatives: the Relation Between their Chemical Constitution and their Effect on the Microorganism. National Institute of Health Bulletin 190, Washington, D. C. 1949.

C.S.M.A. Program for 38th Midyear Meeting in Boston

LEADING management and technical executives, as well as scientists from government, universities and independent research laboratories will discuss new developments in household and industrial sanitation and maintenance chemicals during the 38th mid-year meeting of the Chemical Specialties Manufacturers Assn., to be held at the Sheraton Plaza Hotel, Boston, Sunday, Monday and Tuesday, June 8, 9 and 10. In releasing tentative program details recently, C.S.M.A. also announced that a new division, Automotive Chemical Products, will be organized at the meeting and several papers presented at a meeting of representatives of this field. Formation of the new division brings to six the number of which C.S.M.A. is composed.

New sanitary chemical products, better ways of applying them, and improved methods of testing will be described in papers, panel discussions and symposiums at two general discussion sessions and simultaneous meetings of the five divisions presently making up the association: Aerosol; Insecticides; Disinfectant and Sanitizers; Soap, Detergent and Sanitary Chemical Products; and Waxes and Floor Finishes.

Among those papers tentatively scheduled are: "Dishwashing Detergents" by L. H. Flett of National Aniline Division of Allied Chemical & Dye Corp., New York; "Metal Complexing Agents in Soap, Detergent and Sanitizing Preparations" by H. W. Zussman, Alrose Chemical Co., Providence, R. I.; "Newer Methods for Detergency Testing" by G. M. Ridenour and E. H. Armbruster, National Sanitation Foundation, Ann Arbor, Mich.

Papers above are to be presented at the session of the Soap, Detergent and Sanitary Chemical Products Division, which also meets jointly with the Waxes and Floor Finishes Division to hear the following papers: "Technical Aspects of Floor Cleaners" by Leo Peck and L. P. Wells of Peck's Products Co., St. Louis; "Cleaning and Maintenance of Tile Floors" by J. O. Heppes, Azrock Products Division, Uvalde Rock Asphalt Co., San Antonio, Tex.; "Preperation of Floors for Waxing" by V. Dvorkovitz, Diversey Corp., Chicago; "Wax Removal Studies" by Martin Maglio and F. J. Pollnow of Vestal, Inc., St. Louis.

Papers on Waxes

OTHER papers dealing with waxes include a report on the carnauba wax situation in Brazil by a representative of that country. Also sched-

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uled for presentation are: "Special Process Shellacs for Emulsion Floor Waxes" by Irving Lipman of Acme Shellac Co., Newark, N. J.; "Separation of High Melting Microcrystalline Waxes by Urea Complex Formulation" by Dr. Franklin Mange of Petrolite Corp., St. Louis; "The Detection of Additives in Vegetable Waxes—Part II. Instrumental Analysis" by Charles J. Marsel, Howard Brenner and Frank DeLong of New York University and Cyril S. Treacy of Mamaroneck Chemical Corp., Mamaroneck, N. Y.

The Insecticide Division meetings are slated to hear papers on: "Insect Control by Chemicals" by A. W. A. Brown, head of the Department of Zoology of the University of Western Ontario, London, Ont., Canada; "Housefly" by Luther S. West, head of the Department of Biology, Northern Michigan College, Marquette, Mich.; "The Importance of Insecticides in the Protection of Public Health" by Justin Andrews, Officer in Charge, Communicable Disease Center, U. S. Public Health Service, Atlanta, Ga., and "Fundamental Investigations of the Mode of Action of Insecticides" by Andrew J. Forgash, research fellow, Department of Entomology, Rutgers University, New Brunswick, N. J. In addition, there will be a symposium on "Industrial Uses of Insecticides", with Alfred Weed of John Powell & Co., New York, as moderator, and another on "Insect Control by Chemical Vaporizers", with E. J. Campau of Standard Oil Co. (Indiana), Whiting, Ind., as moderator.

Types of industries to be covered in the symposium on "Industrial Uses of Insecticides" and participating speakers will include: "Fabrics" by George R. Ferguson of Geigy & Co., New York; "Dairies" by R. T. Orr, Diversey Corp., Chicago; "Packing Plants" by W. Schwab of Armour & Co., Chicago.

Symposium on Vaporizers

THE other symposium on insect control with vaporizing devices will hear remarks by R. H. Fulton, Agricultural Research Administration, U. S. Department of Agriculture, Beltsville, Md., who will discuss "Chemistry and Entomological Effectiveness"; T. Walter Reed, California-Spray Chemical Corp., Haddonfield, N. J., will speak on "Lindane", and George R. Ferguson of Geigy & Co., New York, will discuss DDT in vaporizers.

Highlight of the program of the Disinfectant and Sanitizers Division session is a forum: "Germicide Evaluation, What Test Method?", with W. A. Hadfield of Pennsylvania Salt Manufacturing Co., Philadelphia, as moderator. Other members of the panel include: Dr. E. G. Klarmann, Lehn & Fink Products Corp., Bloomfield, N. J.; Dr. Luther A. Black, Chief, Milk & Food Sanitation Lab., U. S. Public Health Service, Cincinnati; Dr. L. S. Stuart, Chief, Bacteriological Section, Insecticide Division, U. S. Dept. of Agriculture, Washington, D. C.; Dr. Herman Shelanski, director, Industrial Toxicology Laboratories, Philadelphia; Dr. Leon Buchbinder, assistant director, Bureau of Laboratories, Department of Health, New York City; Dr. W. L. Mallman, Professor of Bacteriology and Public Health, Michigan State College, East Lansing.

Other papers to be presented at the Disinfectants & Sanitizers Division meetings include one on poultry sanitation by a represenattive of Ralston Purina Co., St. Louis: "In Vivo and In Vitro Testing of Disinfectants" by Dr. William Gump of Givaudan Delawanna, Inc., Delawanna, N. J.; a discussion of newer methods of fungicide evaluation by Dr. Milton Goll of Nuodex Products Co., Elizabeth, N. J. and a talk on sanitation by a representative of one of the large airlines.

Aerosol Papers

THE Aerosol Division program, as just announced, calls for reports on a survey of the aerosol products market now being made by C.S.M.A. and a paper on glass container aerosols by Ralph Thomas of Bristol Myers, New York. A symposium discussion of paint aerosols is also scheduled, as is a panel on aerosol valves, in addition to talks on sales, management and employee relations.

General sessions' highlights include an address by Francis J. Curtis, vice-president of Monsanto Chemical Co., St. Louis, and head of the Washington, D. C. office of the company. He will discuss "Government in Business". Also scheduled are two talks by J. L. Brenn, president of Huntington Laboratories, Huntington, Ind., who will speak on world conditions. Mr. Brenn recently returned from a round-the-word trip sponsored by the Indiana Chamber of Commerce. One talk will cover sociological aspects of world conditions; the other is on business and political phases. Sanitation will be covered in a talk by D. F. Coppell of Wagner Baking Co., Newark, N. J., and Edwin A. Wiggin will speak on the application of isotopes to industrial research. Mr. Wiggin is with the isotope division of the U. S. Atomic Energy Commission.

C. L. Weirich of C. B. Dolge Co., Westport, Conn. is president of the Chemical Specialties Manufacturers Assn., and H. W. Hamilton, managing director.

The program for the 38th mid-year meeting is under the direction of T. Carter Parkinson of McCormick & Co., Baltimore, vice-president of C.S.M.A. and chairman of the program committee. He is being assisted by the chairmen and members of the program committees of the association's five divisions.

DDT Export Quotas Set

The Office of International Trade, U. S. Department of Commerce, recently announced a five million pound export quota for DDT for the second quarter. A quota of 28 million pounds for benzene hexachloride and other agricultural insecticides and fungicides containing 20 per cent or more sulfur was set for the same period.

According to the agency the DDT quota is set so much lower than in the last two quarters—it was 10.3 million in the last quarter of 1951, and 14.7 million for the first quarter of 1952—because of a seasonal rise in domestic needs. OIT said that planned production of 120 million pounds of DDT in 1952 will meet domestic and most of the urgent export requirements. 1952 production is expected to top 1951 by 15 million pounds.

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Pyrethrum Synergists

By R. L. Blickle*
Assistant Entomologist
New Hampshire Agricultural Experiment Station

IN RECENT years a search has been made for materials which will increase the effectiveness of various insecticide formulations. The most successful advance has been made in connection with the pyrethrum insecticides. The methylenedioxyphenyl compounds being the most widely used at the present time. The present work consisted of testing for pyrethrum synergists, using the housefly as the test organism.

The following procedure was used in spraying the houseflies. A toximeter similar to the one described by O'Kane et al (1941) was used. Approximately thirty houseflies were confined in a spherical screen cage. The cage was placed on a phonographic turntable and rotated at a constant speed. A known quantity of spray was then sprayed onto the rotating cage. The spray cone was large enough to envelop the entire cage, with the spray mist passing through the cage. After the spraying operation the flies were removed from the spherical cages and placed in observation cages. Mortality counts were made at the end of twenty-four hours. The mortality figures in these tests were based on female houseflies.

To determine the synergistic activity of the compounds the following procedure was followed. The toxicity of the test material at a concentration of five percent in kerosene was determined. The toxicity of the standard spray was compared with that of the combination spray and the test spray material. All three formulations were tested on the same batch of flies on the same day. The standard spray consisted of 0.1 mg. pyrethrins per 100 cc of household spray kerosene. In cases where the material being test-

* Scientific Contribution No. 131 University of New Hampshire.

Table I

Differences in mortality obtained with pyrethrin-synergist spray and the standard pyrethrin spray.

Material	*Percent Mortality Increase*
Diethyl 3,6-endomethylene 4,-tetrahydrophthalate	51.4
Dibutyl hexahydrophthalate	37.7
Dimethyl 3,6-endomethylene 4-tetrahydrophthalate	35.1
Dimethyl 3,6-endomethylene hexahydrophthalate	28.8
Dimethylhexahydrophthalate	28.5
Diethylhexahydrophthalate	27.1
Dibutyl phthalate	14.1
Diethyl phthalate	13.3
Dimethyl phthalate	12.9
Diphenyl phthalate	9.8
Dicapryl hexahydrophthalate	8.0
Butyltetrachlorphthalate	6.9
Methylchlorethyl hexahydrophthalate	0.0
n-amyl phthalate	0.0
Benzyl phthalate	0.0
B methoxyethylphthalate	0.0
"Cellosolve" salicylate	31.3
Phenyl salicylate	26.0
Benzyl salicylate	19.1
Butyl salicylate	18.0
Salicylaldehyde	6.0
Ethyl salicylate	5.7
Isoamyl salicylate	5.6
Isopropyl salicylate	4.4
Methyl salicylate	4.3
Tributylphosphate	39.3
2,4,6-tripiperidinomethylphenol	34.3
Butylcarbitolacetate	26.3
3-piperidinopropylamine	24.1
Butylcarbitol	23.4
2-ethyl 1-3-hexanediol	23.3
Pentanediol	14.7
2-ethyl hexanol	12.3
Butyl diacetone ether	12.3
Cyclohexane	12.3

Material	*Percent Mortality Increase*
Butyl "Cellosolve"	11.3
Ethyl alcohol	10.3
Isopropyl alcohol	7.1
Dimethylendomethylene 4-5-dichlorocyclohexane carboxylate	6.6
Propyleneglycol monococcate	4.9
Silicic acid	3.8
Butyl naphthenate	3.3
Ethyl naphthenate	1.7
Di ethyl oxalate	0.0
Methyl iso butyl ketone	0.0
Trimetyl phosphate	0.0
Di butyl tartrate	0.0
Butyl stearate	0.0
Octyl alcohol	0.0
2-methyl 2,3 pentanediol acetate	0.0
Dichloracetone	0.0
Tri butyl citrate	0.0
2-methyl 2,4 pentanediol	0.0
Acetoxime	0.0
2 nitro, 2 methyl 1 propanol	0.0
n-propyl alcohol	0.0
Methyl alcohol	0.0
	decrease
Soybean oil	0.0
Pine oil	6.0
Linseed oil	7.9
Tung oil	9.9
Castor oil	20.3
Piperonyl cyclonene (1.0%)	62.1
Piperonyl cyclonene (0.5%)	40.1
N-propyl isome (1.0%)	36.9
Sesame oil (1.0%)	36.2

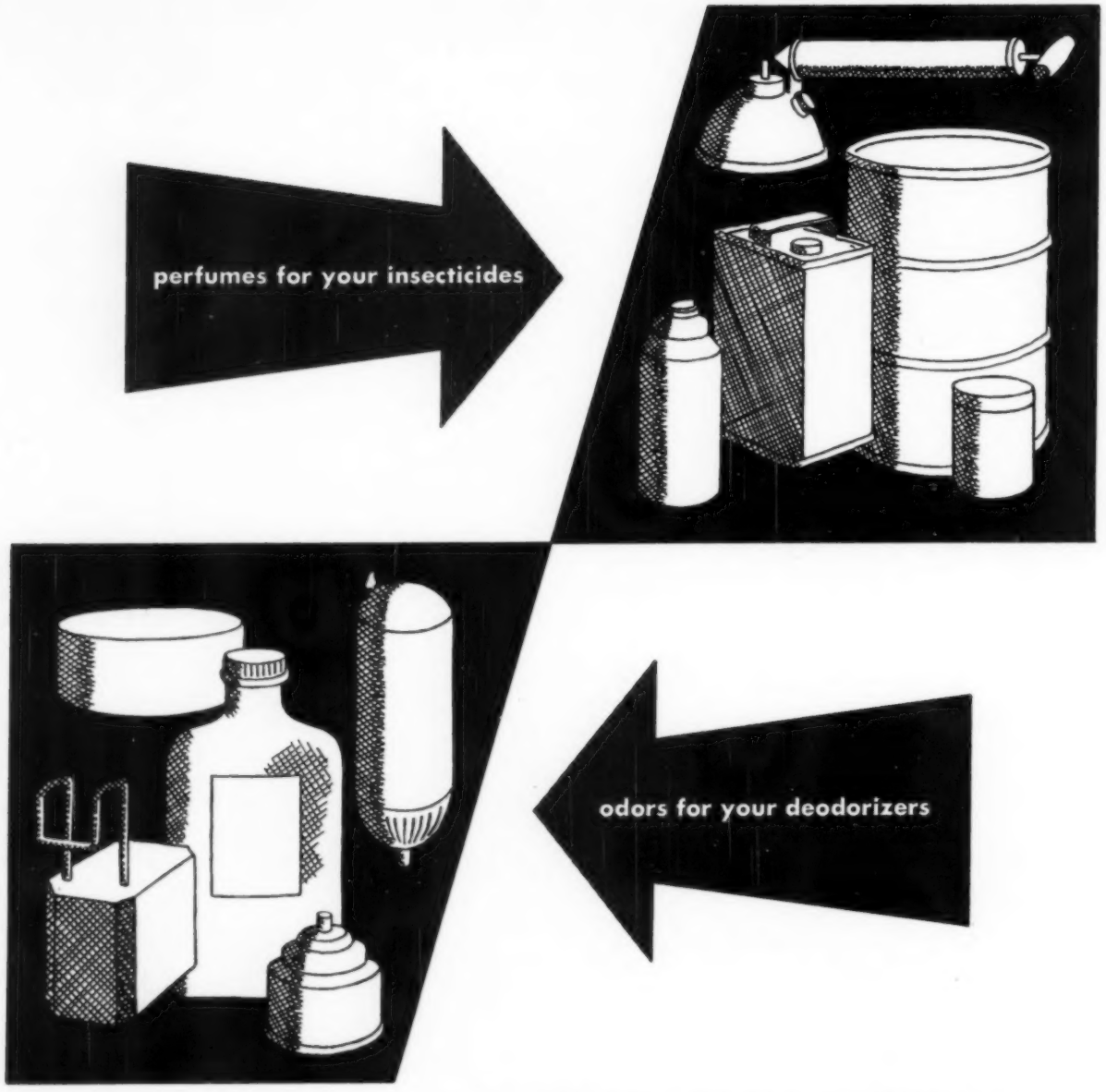

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Table II

Toxicity data of various combinations of pyrethrins and diethyl 3,6-endomethylene 4-tetra hydrophthalate.

Pyrethrins Percent Concentration	*Diethyl 3,6-endomethylene 4-tetrahydrophthalate Percent Concentration* Percent Mortality Increase			
0.10	51.2	41.0	29.2	26.2
0.005	43.3	31.5	21.5	13.0
0.025	29.6	24.0	16.9	14.6
0.010	21.3	11.0	0.0	0.0

ed was not soluble in the kerosene, a mutual solvent was used in the standard and test formulae.

Mortality figures ranging from 20 to 30 percent were obtained with the standard pyrethrum spray.

Results

THE most promising materials tested were the tetra- and hexahydrophthalates, as mentioned by Conklin et al. (1947). Other compounds showing synergistic activity were the salicylates and the ethylene glycol derivatives. Several materials, such as castor oil and tung oil, showed marked antagonistic properties.

The results obtained during the present study exhibited less synergistic action than would be expected from certain compounds such as piperonyl cyclonene, sesame oil, and n-propyl isome. The degree of synergistic action depends, in all probability, on the method of applying the insecticide, method of determining mortality, and various other factors. Craig and Hoskins (1946) have discussed several factors which may influence synergistic action.

Table I gives a list of materials used. The amount of synergistic or antagonistic action, expressed as the difference in percent mortality obtained with the combination spray, as compared with the standard pyrethrin spray, is given for each material.

Table II shows the toxicity data obtained with various concentrations of pyrethrins and diethyl 3,6-endomethylene 4-tetra hydrophthalate. The figures indicate the percent mortality increase of the combinations as compared with the standard pyrethrin spray.

In the case of the phthalates the presence of the endomethylene structure appears to be associated with the synergistic activity of these compounds. However, very little if any synergistic action was shown by dimethyl endomethylene 4,5-dichlorocyclohexane carboxylate, the only other compound having the endomethylene structure. The tetra- and hexyrdrophthalates show greater synergistic action than do the other phthalates with two exceptions.

Bibliography

O'Kane, W. C., L. C. Glover, and R. L. Blickle. An Insect Toximeter. N. H. Agric. Exp. Sta., Bul. No. 76. 1941.

Hoskins, W. M. and R. Craig. Organic Insecticides. Ann. Rev. Biochem. XV:539-572. 1946.

Conklin, J. G., W. C. O'Kane, R. L. Blickle and W. J. Morse. Penetration and Toxicity of Insecticides. N. H. Agric. Exp. Sta. Bul. 372:31. 1947.

New Trade Marks

(*From Page 63*)

D. C. Claims use since February 11, 1950.

Silicote—This for preparation for polishing metal and painted surfaces of automobiles, etc. Filed February 20, 1950 by R. S. Bolling, Los Angeles, Calif. Claims use since November 5, 1949.

White Cat—This for shoe polish and polishing cream, etc. Filed March 18, 1950 by White Cat Products Co., San Francisco, Calif. Claims use since January 15, 1927.

Ironize—This for shoe polish. Filed November 28, 1950 by Hollywood Shoe Polish, Inc., Richmond Hill, N. Y. Claims use since September 11, 1950.

A Billiard Ball Finish—This for liquid and paste wax for use on floors, furniture, and linoleum. Filed August 1, 1951 by C. A. Nash & Son, Norfolk, Va. Claims use since December 1945.

Lovely Lady—This for soap. Filed November 7, 1947 by Brunswick Soap Co., Brooklyn, N. Y. Claims use since July 1, 1946.

All Purpose "W"—This for inorganic detergent having water softening properties, especially for cleaning dairy equipment. Filed July 22, 1948 by Diamond Alkali Co., Cleveland. Claims use since November 16, 1942.

Norway — This for car wash for removing dirt, oil, road film, grease, etc. from surfaces. Filed September 28, 1949 by Commercial Solvents Corp., New York. Claims use since June 17, 1949.

Foam Velvet—This for shampoo. Filed February 20, 1950 by Artistic Beauty Products Co., Los Angeles. Claims use since September 1, 1949.

Triple Clean—This for cleaner fluid for floors, painted walls, tiles, and marble surfaces. Filed February 25, 1950 by Feller-Jones Corp., New York. Claims use since October 25, 1949.

HK—This for soap. Filed May 16, 1950 by H. Kohnstamm & Co., New York. Claims use since April 1, 1947.

M-D—This for soapless cleansing preparation for use in washing dishes. Filed July 14, 1950 by Panther Oil & Grease Mfg. Co., Fort Worth, Tex. Claims use since June 12, 1950.

SC—This for soapless cleansing preparation for use in washing dishes. Filed July 14, 1950 by Panther Oil & Grease Mfg. Co., Fort Worth, Tex. Claims use since June 12, 1950.

Skylark—This for soapless cleansing preparation for use in washing dishes. Filed July 14, 1950 by Panther Oil & Grease Mfg. Co., Fort Worth, Tex. Claims use since June 12, 1950.

cd—This for general purpose household cleaner. Filed August 24, 1950 by Church & Dwight Co., New York. Claims use since August 14, 1950.

X-Act—This for household cleaning cream for cleaning painted and varnished surfaces, etc., and for cleaning hands. Filed October 18, 1950 by Florence M. Hardman, Chicago. Claims use since September 26, 1950.

Jetron—This for silicone base cleaning wax for removing dirt, dust and smudge from glass and plastic surfaces. Filed November 1, 1950 by Jetron Co., Milwaukee, Wis. Claims use since September 26, 1950.

Stratogel — This for cleaning composition for painted, varnished, and enameled surfaces, metal and linoleum. Filed January 10, 1951 by Fine Organics Inc., New York. Claims use since January 9, 1950.

New Day Giz Mu — This for liquid soap for general household and laundry use. Filed April 14, 1950 by Tom W. Parks, Anderson, S. C. Claims use since February 1, 1950.

RoL — This for liquid and solid detergent, granulated or bead form, for general household cleaning purposes. Filed September 6, 1950 by Fels & Co., Philadelphia. Claims use since August 31, 1950.

Dorothy Gray—This for soap and shampoo. Filed December 4, 1950 by Lehn & Fink Products Corp., Bloomfield, N. J. Claims use since 1916.

Only-Wun—This for detergent compositions for use in automatic washing machines and general purposes. Filed June 22, 1951 by Wetalene Laboratories Inc., Columbus, O. Claims use since December 5, 1950.

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New headquarters of American Janitor Supply Co., at 9th and M Sts., Washington, D. C., is designed to impress newcomers in the area who visit the showroom and offices of the sanitary supply firm. The new quarters also gave firm more warehouse space.

Jobber's Salesmen Specialize

CUSTOMERS become acquainted with a business, its products and merchandising techniques through its salesmen. That is a very important reason why the American Janitor Supply Co., Washington, D. C., takes such pains in selecting and training its sales forces.

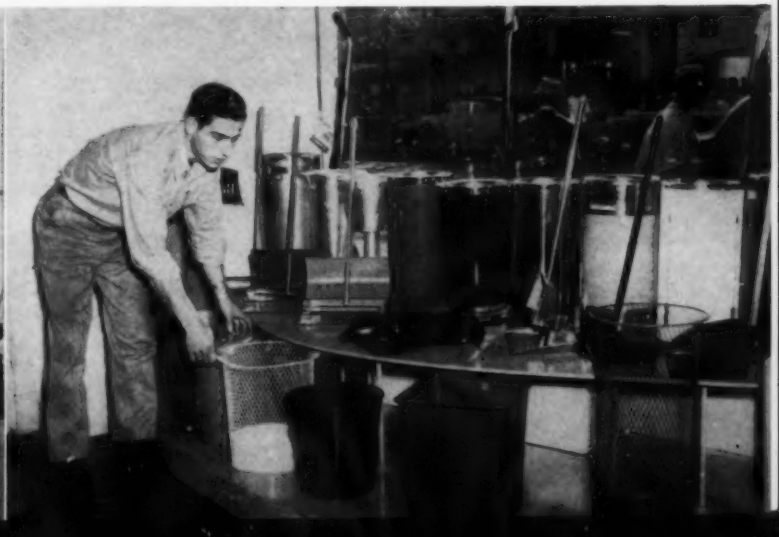
"Very few customers ever come to our headquarters to order supplies and merchandise," according to Ray Yazge, vice-president of the Washington sanitary supply firm. Those that do in all probability are newcomers to the area and are interested in contacting a good supply house. For these two reasons, it has been necessary for us to overhaul our entire organization so that the most is made of all our field contacts as well as those within the firm itself."

American Janitor Supply Co. recently moved to a new corner location at 9th and M streets in the nation's capital. The move gave the firm a greater stock area, allowed easier and freer movement of men-and-materials and also provided the company with a larger showroom in which to set up displays and to hold sales meetings at regular intervals.

"We have always felt that the impression customers have of your firm results from its 'front,' Mr. Yazge explained. "And our front is our salesmen, the building in which we are located and our trucks on the street. For these reasons, all three phases come under our most severe scrutiny."

Salesmen report into the firm before leaving every day. They check their carrying cases to see that they have samples of items to be promoted, advertising literature and are in the right frame of mind to go out and call on people. The firm has four salesmen, besides the two officers of the company, who also do some selling. Each salesman is a specialist in a particular field.

The emphasis is on neat, attractive merchandise displays in the showroom of American Janitor Supply Co., at its new quarters in Washington, D. C. Ray Yazge, vice-president, is shown in both photographs arranging merchandise on easy-to-see display racks.



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One salesman's specialty is in contacting restaurants, another calls on service stations and garages, while a third visits real estate and property owners and the fourth man specializes in institutions. Rather than give salesmen specific areas to cover, it was felt that specific fields of selling would prove more valuable. In this way, salesmen would know what types of products and merchandise are required in the particular field and by maintaining a steady contact of a specific type, other leads to sales would result.

Each salesman drives his own automobile. They work on a straight commission basis. Salesmen bring in orders every evening, and the specials are packed immediately, followed by the regular deliveries.

"We are always interested in stimulating salesmen efforts with promotions," Mr. Yazge said, "and we are keenly interested in manufacturer's promotions. Just recently, one of our sources of supply had a floor wax promotion, in which dealers placing orders of a certain volume received wrist watches. The plan also had an additional incentive by providing that the salesmen selling a certain quantity of the wax also received a gift.

"Our salesmen did a good sales job on this wax promotion and received free gifts themselves. Although our salesmen are specialists in particular fields, they are free to sell wherever they feel there is an outlet for our materials."

Salesmen phone in two or three times daily so that orders can be prepared for the next day's deliveries. Orders telephoned in are confirmed by written ones when salesmen come to the headquarters at the end of each day.

After covering their regular routes, salesmen make cold contacts in the field which initially do not generally result in orders, but eventually result in sales and a growing list of customers.

"We handle everything in cleaning needs, from washroom and floor supplies for use in institutions to shelf merchandise that service stations, hardware stores and other outlets regularly stock," Mr. Yazge explained. "The larger our line the more customers we can satisfy."

The firm tries to have products packed in containers and wrappers bearing its own trade name. The company tried to repack some merchandise itself a while back, but found the wages, time and expense involved were too great for the plan to be operated economically. The firm then asked supplier to do this chore for them in as many situations as possible.

"Although we sell a complete line of paper and paper products, we do not stress this merchandise to our customers," Mr. Yazge said. "That is because there are so many exclusive paper houses in the vicinity that to compete with them would result in our stocking tremendous quantities and types of paper to be able to offer it at competitive prices. We do sell the usual requested paper products, such as towels, toilet tissue and napkins, but we stay out of other types."

The new location has given the firm an opportunity to make several interesting displays within the store. Such displays are devoted to specific lines of merchandise, such as waxes, polishers and cleaners on one, then receptacles, ash trays, sweepers supplies and allied merchandise on another.

"A visitor to our showroom is usually a newcomer in the area interested in making contact with a reputable supply house," says Mr. Yazge. "They can make initial selections from our displays, order other merchandise from our catalogs and from that time on are visited regularly by our salesmen."

All merchandise in the new three story building is stocked according to merchandise classifications. The firm reorders certain staples on a continuous basis and relies upon its packers to keep records on certain stocks.

An electric conveyor is used to take new merchandise to the different floors where it is stacked in a particular location. This same conveyor is also used to handle merchandise being packed for orders. Packers load selected items on the conveyor and they travel to the main floor

(*Turn to Page* 129)

Electric conveyor used to carry merchandise to different floors for storage. It can also handle merchandise packed for shipment.

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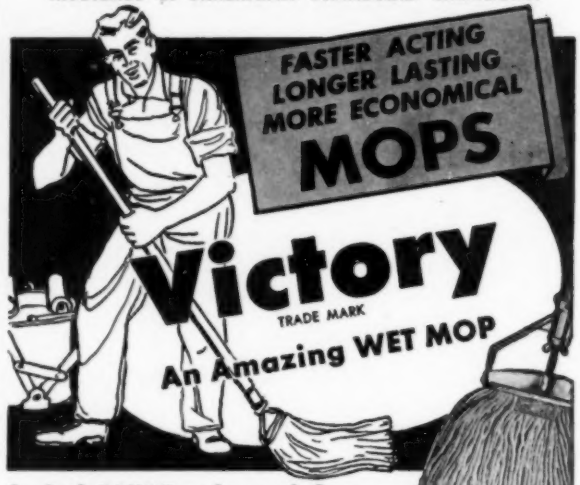

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The firm has two trucks for making deliveries. One truck is painted to promote the firm and the other features brands of waxes and polishes promoted by the company. Two deliveries are made daily and the trucks are routed to cover sections, such as the N. E., N. W., S. W., S. E. and so forth. Thus complete coverage of the firm's sales areas is made regularly.

"Most of our business is conducted on a C.O.D. basis, but we do have numerous accounts that pay on a 2/10 net 30 day arrangement," said Mr. Yazge. "Either is satisfacfactory and we seldom suffer any losses."

Cationics

(*From Page* 43)

surfaces for operative treatment or for actual treatment of certain diseases and infections, the quaternaries appear to perform satisfactorily and it is to be expected they will continue expansion in this field.

Quats as Antiseptics

I MIGHT add that the quaternaries have not been proven to be foolproof antiseptics or disinfectants for these fields. They do have some good properties but occasionally unexpectedly poor results are obtained. However, their low toxicity and ease of application as compared with some of the products that they supplanted are highly favorable. Furthermore, it must be emphasized that their success in this field has in large part been due to the careful supervision of their use by the highly trained medical and dental personnel. In no other use or industry would we find such careful supervision all the way down. When the quaternaries fail, other agents are available immediately. No attempt is made to use them as cure-alls.

The main potential for expansion of the market for cationics as disinfectants lies in their possible industrial use. There has been initial acceptance of such products for a number of applications. Their success or failure has varied with the particular industry, the competition of existing products and other factors such as health department regulations and the species of bacteria usually encountered. The better and more regulated industries have been slower in accepting these new products and have required considerable evidence in support of superior results from their use.

Rather than attempt to discuss briefly the very many varied applications and their particular problems, it would be preferable to discuss a little more fully the problems of introducing cationic disinfectants to one industry—the dairy industry—since it represents a very large segment and the problems are typical to a considerable extent.

Chlorine in many different forms ranging from hypochlorite solutions through solid calcium hypochlorite to the more satisfactory stable solid chlorinated complexes of trisodium phosphate, were and still are the main chemical disinfectants in this field. They are considerably cheaper than the quaternary product, they have a record of many years of successful use while such disadvantages as the regular chlorine odor are not pertinent since the operator who uses it is accustomed to it and does not find it disagreeable. The chlorine products have the approval of various health departments. As a result of this situation, the introduction of quaternaries into this field has been subject to a very critical appraisal by all of the interested parties.

We have previously mentioned the inherently unstable character of surfactant solutions. It is not to be unexpected therefore that these solutions would be very sensitive to outside influences. Other surfaces present in contact with the solution might adsorb the quaternary preferenially and prevent it from being effective by adsorption on bacteria. Addition of electrolytes to the solution might change its characteristics.

Thus, many adverse properties of quaternary disinfectant solutions have been discovered that seriously affect their general use and likewise many health departments as a result have refrained from their approval.

Thus the solutions are biologically inactivated by low temperatures, water hardness, contaminations and other than biological factors,—i.e., for example, milk solids and certain chemical ingredients that are compounded with the quaternary to get improved results or to overcome other adverse effects such as are caused by hard water. Thus it would appear that in conditions other than ideal their use is unreliable. Considerable efforts to adapt quaternaries to the industry have been made and now they are being promoted not as a straight disinfectant but as a sanitizer. This type of product is essentially a cleaner that allows for some reduction in bacterial population but its use does not of itself guarantee disinfection.

However, even this use is adversely affected by the recent discovery by Candian authorities that bacterial organisms can become resistant to quaternary products. Thus an organism, *Serratia marcescens*, can be adapted to grow in concentrations greater than were originally lethal. Similar results have been obtained with *E.coli* organisms. This adaptation of living bodies to their surroundings is not unusual—a very recent case has been the developed resistance of flies to D.D.T.

It is feared that the repeated applications of a sanitizer which would be insufficient to effect a complete kill might allow for the development of resistant organisms in much the same way as the Canadians developed resistance in their laboratory.

I would predict that the use of quaternaries as anti-biotic agents in the industrial field will probably remain static until all these points are cleared up. At any rate, there will be no spectacular increase in their use in the near future.

From a marketing standpoint, it is far better to build on firm foundations than have an expanded market that collapses when inadaquacies are revealed that result in withdrawal or loss of the market. Regardless of the outcome for certain applications, the market for cationic surfactants can look forward to a steady and continued growth.

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Floor Polishes

(*From Page* 110)

	parts
Oxidized microcrystalline wax	31.0
Oleic acid	14.0
Triethanolamine	7.0
Borax	7.0
Water	744.5

A number of other waxes and wax blends are being employed as complete or partial replacements for carnauba (17, 24, 33, 34). Moreover, as indicated in recent patents (35) describing the production of specially prepared hydrocarbon waxes, new waxes are constantly being developed for use in the manufacture of emulsion polishes.

It is common practice, in making emulsion type floor polishes, to add solutions or dispersions of shellac, Manila resin, casein or similar materials to improve the properties of the products. Used in amounts ranging from 10 to 20 per cent, such preparations serve to increase the spreading and leveling or flow-out properties of the non-rubbing floor polishes. Formulas for making these additives are available from a number of sources (29, 36, 37). However, the following formulas (31) will serve to indicate their general composition:

	I	II	III
Shellac (bleached, dewaxed)	3.5	—	—
Manila Laba B resin (powdered)	—	3.5	—
Casein	—	—	3.50
Ammonia (28%)	0.5	1.2	3.35
Water	32.0	32.0	32.00
Phenol	—	—	0.16

A number of synthetic resins are laso finding use as replacements for the shellac and natural resins employed in making these additives. (38, 39, 40) The patent literature (41, 42) offers several examples of resins, including maleic anhydride modified glycerine-rosin esters, that are suitable for inclusion in wax emulsion polishing compositions. In passing, it should be noted that floor polishes with high shellac content are offering competition to wax emulsion products. (43)

Of course the possibility has not been overlooked that silicones might be used in floor polishes. Indeed, at least one product (and probably more) containing silicone is now being manufactured. Todd (44) has reported that experience with silicones in floor polishes and waxes indicates that they can be formulated into an easily applied polish with excellent water-repellancy. However, a silicone floor polish is too slick for safety, but when used in small quantities in wax emulsion type polishes, silicones could provide improved leveling and better water-repellency. In paste type polishes, a small amount of silicone fluid should facilitate application without causing excessive slip.

From time to time a number of products have been developed to meet special requirements. An interesting example of such a product is offered in the following antistatic floor wax composition:

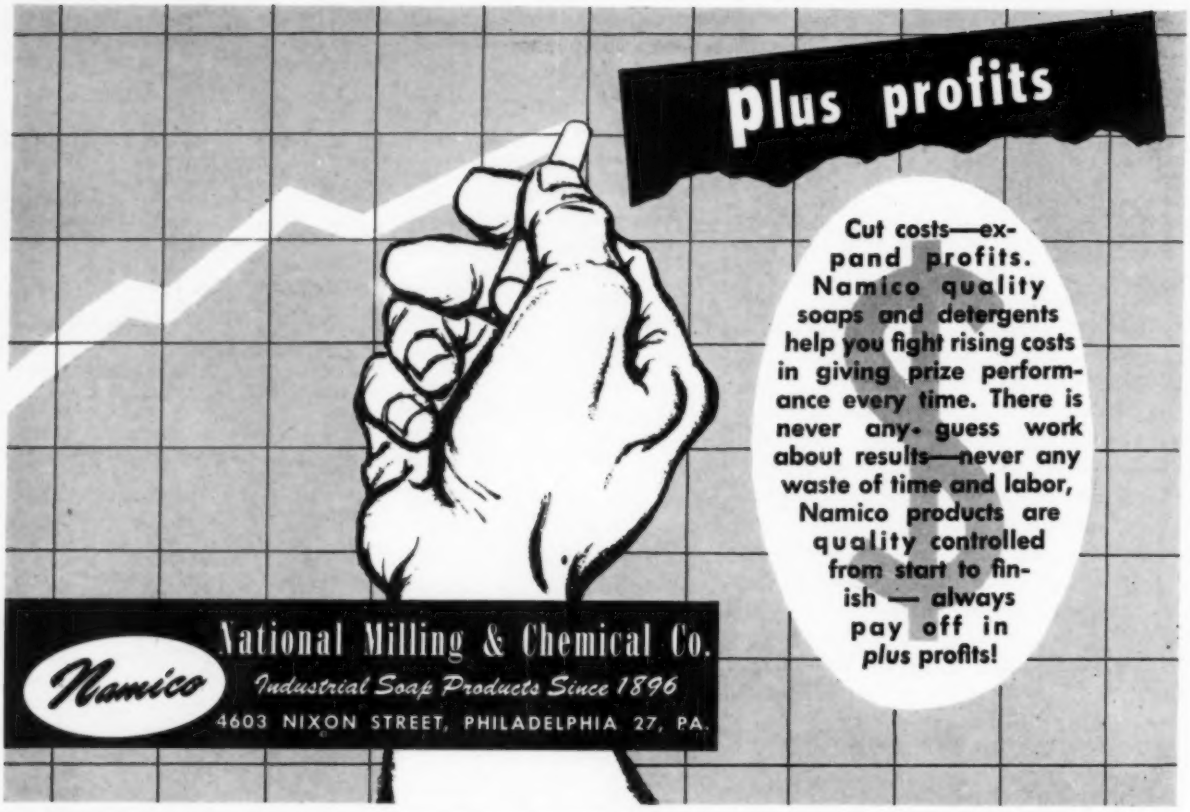
Carnauba wax	18%
Emulsifier (*Amine S)	3%
Acetic acid (80%)	1%
Water	78%

(*Alrose Chemical Co., Providence, R. I.)

In addition to its antistatic properties, this product has high resistance to water spotting and is particularly suited to use on glass floors, such as are found in library stacks and the like.

Bibliography

1) Anon.: "Consolidated Consumer Analysis Information," Washington, 1951, pp. 60-1
2) Anon.: "Consumer Analyses of the Indianapolis Metropolitan Market," Indianapolis Newspapers, Inc., 1951, p. 62
3) Anon.: *Soap & Sanit. Chem.* 27:125, May, 1951
4) Warth, A. H.: "Chemistry and Technology of Waxes," New York, Reinhold Publ. Corp. 1947 pp. 391-8
5) Sigler P. A.: *Soap & Sanit. Chem.* 26:121 Sept. 1950
6) Symposium: *Mod. Sanitation* 3:32 Nov. 1951
7) Lesser M. A.: "Modern Chemical Specialties," New York, MacNair-Dorland Co., 1950, pp. 258-268
8) Sveda, M.: *Soap & Sanit. Chem.* 25:115, Aug. 1949
9) Elliot, I. C.: U. S. Pat. 2,492,975, 1950
10) Schoenholz, D. & Kimball C. S.: *Soap & Sanit. Chem.* 23:131, Aug. 1947
11) Weirich, C. L.: *Mod. Sanitation* 2:33, Sept. 1950
12) Luthy, W. & Luthy, W., Jr.: Swiss Pat. 261,370, 1949
13) Moore, A. E.: *Chem. Ind.* 65:562, 1949
14) Wood, G. W.: *Manuf. Chem.* 19:99, March, 1948
15) Lovell, S. P. & Straw, H. H.: U. S. Pat. 2,523,705, 1950
16) Arabian, K. G. & Schaerer, A. A.: U. S. Pat. 2,546,328, 1951
17) Kroner, A. A.: *Soap & Sanit. Chem.* 27:110, March, 1951
18) Anon.: *Soap and Sanitary Chemicals Blue Book*, 1951, New York, MacNair-Dorland Co., pp. 225-6
19) Wood, G. W.: *Soap, Perf. & Cosmetics* 21:1133, 1948
20) Pabst, A. C. & Holzinger, R. J.: U. S. Pat. 2,561,816, 1951
21) Vallance, J. M.: *Manuf. Chem.* 18:161, April, 1947
22) Knight, W. J.: Brit. Pat. 623,701, 1949
23) Anon.: "Care of Floors," Washington, National Bureau of Standards, Letter Circular LC 764, 1944, pp. 6-11
24) Aelony, D.: U. S. Pat. 2,404,896, 1946
25) John, W. D.: "Modern Domestic and Industrial Polishes and Specialties," Newport, (England), R. H. Johns, Ltd., 1946, p. 39
26) Brush, H. P.: U. S. Pat. 2,536,349, 1951
27) Anon.: *Soap & Sanit. Chem.* 25:141, Dec. 1949
28) Eaton, J. L. & Hughes F. A.: *C.S.M.A. Proc., Dec.*, 1950, p. 197
29) Figliolino, A.: *Paint & Varn. Prod.* 41:14, Jan. 1951
30) Davidsohn, J. and Davidsohn H.: "Polishes, Their Raw Materials and Manufacture," Ed. 2, London, Leonard Hill, Ltd., 1949, pp. 134-148
31) Anon.: "Emulsions and Detergents," Ed. 8, New York, Carbine & Carbon Chem. Corp., 1949, pp. 40-2
32) Anon.: *Ind. Wax Rev.* 1:3, Dec. 1946
33) Liesh, L. W.: *C.S.M.A. Proc.*, Dec. 1950, p. 215
34) Anon.: Data Sheets: Refined Concord Waxes Nos. 159 and 190, Moorestown (N. J.), Concord Chem. Co., 1951
35) Fish, J. J.: U. S. Pats. 2,573,422-3, 1951
36) Anon.: "Preparation of Emulsion Paints and Polishes," New York, American Gum Importers Labs., Inc., 1949, 11 pp.
37) Anon.: "Crown Quality Emulsifiable Waxes," New York, Petrolite Corp., Ltd., 1949, 4 pp.
38) Mellan, H. J.: *C.S.M.A. Proc.*, June 1950, p. 169
39) Anon.: "Waxes for Polishes and Finishes," Ed. 7, New York, Cornelius Prod. Co., 1951, p. 22-3
40) Anon.: "Amberol 750 in Wax Emulsions," Philadelphia, Rohm & Haas Co., 1950, 3 pp
41) Schoenholz, D. & Kresser, L.: U. S. Pat. 2,482,070, 1949
42) Howley, T. G., Jr., Kummer, B. J., Barnes, J. W., Jr.: U. S. Pat. 2,483,701, 1949
43) Anon.: *Chem. Week* 69:35, Oct. 27, 1951
44) Todd, C. W.: *C.S.M.A. Proc.*, Dec. 1950, p. 212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News

Elect Rasmussen Delegate

Arthur Rasmussen, vice-president of Furst-McNess Co., chemists and manufacturing pharmacists, Freeport, Ill., recently was one of two successful candidates out of four, to win a seat as delegate from the 16th Congressional District of Illinois to the Republican National Convention which convenes in Chicago July 7th. He is a former C.S.M.A. board member.

ARTHUR RASMUSSEN

Shell Buys Hyman

Shell Chemical Corp., New York, has completed arrangements to purchase the stock of Julius Hyman & Co., of Denver, and has concluded an agreement with Velsicol Corp., Chicago, for exclusive rights worldwide, to aldrin and dieldrin, it was announced May 1 by Jan Oostermeyer, president.

Shell Chemical has marketed aldrin and dieldrin since their commercial introduction in 1950, at which time they were manufactured by Julius Hyman & Co. On March 17, 1952, however, following lengthy litigation, a court order granted patent rights on the insecticides to Velsicol Corp.

Julius Hyman & Co. will continue to be operated under its present name, Mr. Oostermeyer said. "We expect not only to continue production of aldrin and dieldrin," he added, "but also to accelerate developments of new products."

Powell Opens Paris Office

The opening of an office at 56 Rue de Bassano, Paris, France, was announced recently by John Powell & Co., New York. It will be the European headquarters of Powell's overseas affiliate, John Powell International, Inc. The new office is being managed by Claude Mouries, who has represented the firm in North Africa for the last several years.

Ray Joins Conco Sales

Appointment of W. N. Ray to the sales training department of Conco Chemical Co., Dallas, Tex., was announced recently. Mr. Ray is a native of Dallas, and comes to Conco from an eastern firm where he has had several years experience in the sanitary supply field. He will do some personal sales work for Conco in addition to his other duties.

New Johnson Floor Wax

A new liquid floor wax, capable of drying clean and waxing in one operation, was announced recently by S. C. Johnson & Son, Inc., Racine, Wis. A blend of vegetable waxes and mineral waxes, plus an improved cleaning solvent, the new wax is tradenamed "Beautiflor". The product can remove spots caused by lipstick, black rubber heels, crayons, chewing gum, tar, grease, etc. It is recommended for use on linoleum, furniture, woodwork, metal surfaces, etc. It retails at approximately 79 cents per pint.

Mass Returns to Ampion

After an eighteen months' leave of absence to serve in the U. S. Navy, Henry Mass recently returned to Ampion Corp., Long Island City, N. Y., to resume his duties as vice president in charge of sales.

His tour of duty with the Navy was spent with the staff of Admiral Ballentine, Commander Air Force, U. S. Atlantic Fleet. His duties consisted of work with the Force Training Officer in setting up training programs, schedules and syllabi, and in maintaining records of such programs.

He was headquartered in Norfolk, Va., but made flying trips to various Naval Air Stations on the Atlantic seaboard as well as in the Caribbean.

HENRY MASS

Bostwick Names Two

Harold Kern has been appointed controller and Joseph L. Condon, Jr., assistant general sales manager of Bostwick Laboratories, Inc., Bridgeport, Conn., it was announced recently.

Wax Antislip Group

An industry advisory conference on antislip materials in waxes and floor finishes was recently appointed by Underwriters' Laboratories, Inc., Chicago. The following are to serve in the group for two years: Melvin Fuld, Fuld Brothers, Baltimore; D. M. King, Masury Young Co., Boston; E. A. Budner, S. C. Johnson & Son, Racine, Wis.; Al Candy, Jr., Candy Co., Chicago; Bayard S. Johnson, Franklin Research Co., Philadelphia.

Wakefield Joins Horn

Walter R. Wakefield recently joined A. C. Horn Co., Long Island City, N. Y., as field sales supervisor. He will specialize in the marketing of Horn floor finishes and maintenance materials.

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Article on John Powell & Co.

"POWELL and Pyrethrum" are discussed in an article appearing in a recent issue of *Pyrethrum Post*. John Powell & Co., New York, was founded in 1923 as a crude drug house for the importation and distribution of botanicals, by John Powell and G. R. Rinke. A few years later the firm's original letterhead "crude drug importers — exporters — millers" had given way to "specialist in pyrethrum." As the pyrethrum industry progressed Powell expanded its activities; it was a pioneer in the manufacturing and selling of liquid concentrates. In extending the use of pyrethrum in agriculture, and in the development of a suitable synergist. This latter development enabled pyrethrum to compete pricewise with many of the newer and cheaper insecticides and paved the way for a considerable wider use of the material.

Early in its research and control program the Powell Company formed Entomological Testing Laboratories, now known as John Powell Laboratories. The original facilities have been replaced by modern chemical entomological, and field-testing facilities located at Port Jefferson, N. Y.

John Powell & Co., according to the article, was the first to market an activated pyrethrum concentrate, combining pyrethrum's advantages with a definite saving in cost and material. This new concentrate was brand-named "Pyrin." Today this brand name covers a whole series of such concentrates.

During World War II Powell produced pyrethrum concentrate for the millions of aerosol bombs used by the Armed Forces. It also developed a number of formulations combining DDT and pyrethrum.

H. Alvin Smith, who joined the firm in 1942 is now president of John Powell & Co. He acquired firsthand knowledge of pyrethrum by working closely with government agencies charged with procurement of insecticides during the war. He also traveled extensively and visited African pyrethrum-growing areas. Mr. Smith also maintained close contact with the experimental pyrethrum growing project of the firm's Argentine affiliate.

Vice-president in charge of sales is Dr. Alfred Weed, who came to Powell in 1929. He formerly headed the laboratories and much of Powell's research and control program are due to his efforts. The third executive officer is William Pollert, vice-president in charge of export and overseas operations. He joined the firm in 1930. As plant manager he played an important part in the development of Powell's pyrethrum extraction and milling processes, and in 1940 he supervised the erection of the Powell plant in the Argentine. Dr. R. C. Haring, formerly plant manager, is now director of John Powell Laboratories at Port Jefferson and supervises all of the company's research activities.

In 1940 an affiliate, John Powell Chemical Co., was organized in Huntsville, Ala., to augment production facilities.

Prentiss Appoints Harris

Appointment of Dr. C. S. Harri as entomologist for the insecticide division of Prentiss Drug & Chemical Co., New York, was announced recently. Dr. Harris, a graduate of Ohio State University, spent many years with the Shell Oil and associated companies as entomologist and agricultural specialist. His experience includes work with the U. S. Department of Agriculture, the Missouri and Ohio Agricultural Experiment Station, and a professorship in biology at Rio Grande College.

C. S. HARRIS

Moore Issues Price List

A new price list and catalog sheet on its line of soap dispensing equipment was issued recently by Moore Brothers Co., New York. No price increases are shown. One new item, "Tanc-Typ" 500 is included. All models of soap dispensers shown are available for immediate delivery.

U.S.I. Moves Head Office

The head office of U. S. Industrial Chemicals Co., Division of National Distillers Products Corp., was recently moved from 60 E. 42nd Street, to 120 Broadway, New York 5. Telephone number of the new office is WOrth 4-3000. The move does not affect the address of U.S.I.'s New York sales division offices, which remain at 33 W. 42nd Street.

Mill Creek Sales Brochure

Mill Creek Products Co., New York, recently issued a brochure on ways jobbers may increase sales of insecticides sold under private label or with the Mill Creek name. The nine by 12 inch, plastic bound, hard cover brochure features a third cover pocket containing a booklet dealing with the effectiveness of the firm's insecticides.

D. J. Finlayson Dies

Donald J. Finlayson of Chappaqua, N. Y., who resigned a short time ago as merchandise manager of the Bridgeport (Conn.) Brass Co., died recently in Daytona Beach, Fla. He was 42 years old. Born in Cambridge, Mass., Mr. Finlayson was graduated from Harvard. He served as an executive for Procter & Gamble Co., Lever Brothers Co., and Lehn & Fink Products Corp. Surviving are his widow, Mrs. Eleanor Peterson Finlayson; his mother, Mrs. Donald Finlayson; two sons, Ian and Stuart; two daughters ,Julie and Heather Finlayson, and two sisters, Mrs. Mark Duhig, and Mrs. John Palle.

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Canco Names Stephens

C. S. Stephens, associated with American Can Co., New York, for 30 years, was recently appointed man-

C. S. STEPHENS

ager of the firm's non-food container sales division in New York. Formerly central division non-food sales manager in Chicago, Mr. Stephens succeeds T. F. Brennan who recently was named manager of the company's new packaging development division. J. W. Wardell, previously manager of the firm's Kansas City district sales office, will take over Mr. Stephens' post in Chicago.

Mr. Stephens joined Canco in 1922 at its Brooklyn plant, and then held various sales positions in Pittsburgh and Baltimore. In 1938 he became local manager in Philadelphia, and from 1942 to 1948 he was assistant district sales manager of the New York state district.

Mr. Wardell has supervised sales activities for the past four years throughout western Missouri, Nebraska, Kansas, and Oklahoma. He joined Canco in 1932, became a salesman in 1936, serving in the New York and Philadelphia metropolitan areas. Mr. Wardell is a graduate of the University of Notre Dame.

Penta Booklet Issued

Detailed answers to questions freqently asked about pentachlorophenol, a chemical used to protect wood against decay and insect attack, are contained in a 40-page booklet made available recently by Monsanto Chemical Co., St. Louis, Mo.

The 51 questions answered in the booklet are those which Monsanto representatives have been asked most often about pentachlorophenol. They range from "What is Penta?" to "How do Penta solutions preserve wood?"

Mississippi Bill Is Law

Mississippi House Bill 612 was approved recently and is now in effect. It requires all non-residents selling products in the state which are subject to the Mississippi Economic Poison Act of 1950 to file a power of attorney designating the Secretary of State as agent to accept service of process. Companies having a resident agent in Mississippi under the general qualification law are exempt from this requirement.

In addition, the law authorizes the State Plant Board to require such non-residents to post a fidelity bond as a condition to doing business in the state. A ceiling of $10,000 is set on the principal of the bond.

According to Dr. Clay Lyle, state entomologist, non-residents selling household economic poisons are not affected by the bonding requirements although they are required to designate the Secretary of State as resident agent for the service of process.

Charter for Palmetto

Palmetto Chemical & Supply Co., Cheraw, S. C., has obtained a charter from the secretary of state to buy, sell, compound, and distribute cleaning and sanitary supplies. Authorized capital stock is $25,000. Bandy A. Herman is president.

Akeson Joins U.S.I.

Robert Akeson recently joined U. S. Industrial Chemicals Co., Division of National Distillers Products Corp., New York as assistant advertising manager. Prior to his appointment Mr. Akeson was associated for four years with G. M. Basford Co., New York, advertising and marketing agency, with time out for service in the Army Occupation Forces in Germany.

CSC Appoints Hamilton

Abbott K. Hamilton, a vice president of Commercial Solvents Corp., New York, has been placed in

A. K. HAMILTON

charge of Product Divisions, J. Albert Woods, president, announced recently. Mr. Hamilton succeeds H. J. Henry who recently resigned. Mr. Hamilton has been with Commercial Solvents since 1946 when the corporation purchased Pennsylvania Alcohol and Chemical Corp. of which he was vice president.

Varley Offers New Cleaner

"Liquid Gold," a new floor cleaner and preservative was recently introduced by James Varley & Sons, Inc., St. Louis. It is claimed by the manufacturer to be a new combination of the latest developed synthetic sudsing agents and detergent compounds. It also contains "Varlinium," an activating ingredient, which is claimed to impart water-softening and sudsing qualities even in hard water. "Liquid Gold" is said to neutralize completely the hardness of water and to lather profusely. The product is sold in golden colored containers with gold labels.

Stanley Earnings Off

Stanley Home Products, Inc., Westfield, Mass., recently reported for 1951 a consolidated net profit of $2,709,401, after $4,377,617 taxes, compared with 1950 earnings of $2,884,811. Sales in 1951 were at a record high of $52,183,480, as against $37,987,036 a year earlier.

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Ottafect is a liquid—very easy to formulate—and of low toxicity.

Information concerning specifications and formulations is available on request. It is suggested that such information be obtained before formulations are considered since Ottafect is as versatile for general disinfectant use as Ottasept is for body antiseptic use.

Please address enquiries to Dr. S. Boyk, Research Director.

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2. Extend the use of high-priced vegetable waxes by adding one of the Petrolite family to your formulation. Petrolite waxes are highly compatible, making them ideally suited to use as extenders.
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4. Send for samples, technical booklets and price lists. It will pay you to have complete information on Petrolite waxes.

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Canadian PCOs Meet

The tenth annual Canadian Pest Control Operators' conference is being held May 12, 13, and 14 at the University of Montreal. It is sponsored by the University of Montreal in cooperation with the Canadian Pest Control Operators' Association. The session of the first morning includes basic courses on the fundamentals of zoology, biology, biochemistry, pest control and genetics. These are followed by a short business session and luncheon. The afternoon session is concerned with occasional invaders: mammals, reptiles, birds, mites, ticks, spiders, and other insects. Chemical and other measures for their control is being taken up at this session. In the evening there are to be two films and a course on business administration for the pest control industry covering estimating and establishing prices; advertising and insurance.

A laboratory session clinic is scheduled for May 13 dealing with ants and moths, their life histories, feeding habits, damage, source of infestation, etc. The afternoon session consists of papers on residual chemicals in fly control, control procedures against weevils in granaries and elevators, construction of atmospheric fumigation chambers, and a panel discussion on headaches in insect control. This is followed by the annual business session, and by the annual banquet in the evening.

The morning session May 13 covers rat control: biology of rats and rat-borne diseases; control measures in general; rat proofing; rat odors; plumbing in relation to rodent control. There is to be a question and answer period before lunch, and a tour of the city in the afternoon.

Revised Lindane Booklet

Publication of a revised edition of the 32-page book entitled "The Story of Lindane" was announced recently by California Spray Chemical Corp., Richmond, Calif. The publication was prepared for distribution to formulators who use lindane in their products. It points up the importance and potential of lindane's use in formulations for all fields of insect pest control. The new edition carries information on more recent uses, such as in vaporization equipment. A short history of lindane is included, several pages of research and technical data supply information on formulations and methods of application, methods of action, analytical procedure, toxicology, and compatibility. As a guide to formulators sample labels currently registered with the Federal Government are reproduced. The booklet also gives a bibliography of lindane, and brief background of the company.

Exterminators Hear Dolin

Professional Exterminators Association held a meeting April 14 at the American Museum of Natural History, New York. Guest speaker was B. H. Dolin, State Department of Labor, on use of insecticides and rodenticides and care to be exercised in their use.

Spirer Joins Sonneborn

Lawrence Spirer, former member of the tax department of S. D. Leidesdorf & Co., certified public accountants, recently joined the executive staff of L. Sonneborn Sons, Inc., New York.

Boston BIMS Golf Dates

Golf parties arranged by BIMS of Boston for the coming season are as follows: June 25—Weston (Mass.) Golf Club; August 14—Dedham (Mass.) Polo & Country Club; September 16—Nashua (N. H.) Country Club.

Article on Puritan

Puritan Chemical Co., Atlanta, Ga. was the subject of a feature article in a recent issue of the *Atlanta Journal and Atlanta Constitution*. Puritan, manufacturer of waxes, cleaning compounds, disinfectants, insecticides, liquid soap, etc., was founded in 1920 by A. L. Feldman. It now occupies a five-acre site, utilizing more than 70,000 square feet of space. In recent years business volume has increased by approximately 35 percent annually.

According to Mr. Feldman the company has produced approximately 175,000 gallons of wax under government contract during the first quarter of 1952, this in addition to production for civilian use. Marketing is handled by the firm's retail division, Puritan Sales Corp. Two cents of every dollar of sales, says Mr. Feldman, go back into research. Officers of the company include M. A. Feldman, executive vice-president; Ted Fisher, vice-president in charge of sales; E. B. Feldman, vice-president in charge of production; Morris B. Mendelson, vice-president; and W. H. Frey, secretary and treasurer.

New Chlordane Folder

A new folder entitled "Mosquito Control with Chlordane" was recently issued by Velsicol Corp., Chicago. It gives details on chlordane application and formulation for the effective control of mosquito larvae and adults. A chlordane dilution guide is included. Copies available on request.

Among those present for the reception marking the 25th anniversary of Hild Floor Machine Co., Chicago, recently were Irving Wexler, Buckingham Wax Co., Long Island City, N. Y., second from left, Philip Janvey and Mrs. Janvey, I. Janvey & Sons, Hempstead, N. Y., and Mr. Fred Hild, second from right.

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GSA-Wax Industry Meeting

A MEETING of floor wax manufacturers and representatives of the General Services Administration of the Federal Supply Service was held at the U. S. Courthouse in New York, April 23. The purpose of the meeting, which was attended by over 100 industry and government representatives was called for the purpose of "defining a quality of wax (water emulsion floor) adequate for use by the Federal Government (and) to discuss several proposed modifications to existing Interim Federal Specification P-W-151b (GSA-FSS) and Amendment 1 thereto . . . "

The meeting was called by L. F. Donahue, Acting Deputy Regional Director, who opened the all-day meeting, which started at 10:00 a.m. The New York office of the Federal Supply Service is now responsible for all purchases of floor waxes by the F.S.S.

Cancellation of Federal Specification P-W-151b was announced at the meeting and presumably a new tentative specification will be issued until one worked out by manufacturers and government officials is available.

It was also brought out that the Federal Government wax manufacturing plant operated in Washington, D. C. by the G.S.A. has been shut down since Dec. 15, last. Equipment for a similar plant in New York has been acquired and is in a government warehouse here, as was reported by *Soap and Sanitary Chemicals* earlier this year. GSA officials at the meeting indicated that a government wax plant would not be set up in New York, although it was admitted that the equipment is still in the possession of the government.

In general, the all-day meeting consisted of a discussion of the reaction to the wax currently bought by the Federal Supply Service for several government agencies and departments. Ways to improve the wax through changes in specification PW 151b were also discussed.

J. J. Crawford, who is in charge of wax purchases for the Federal Supply Service, General Services Administration, New York, presided at both morning and afternoon sessions.

Addressing the morning session were Frederick R. Brant of the Public Buildings Service, G.S.A.; Thomas E. O'Rourke, U. S. Public Health Service Hospitals; Alfred Barden, U. S. Army; A. R. Hamilton, Veterans Administration, and William Baldwin, New York Navy Yard, New York.

The gist of their remarks was that in certain respects the waxes available to them through the Federal Supply Service were not satisfactory. Price was not the most important factor; wearability, appearance and anti-slip are the properties most desired in waxes for government institutions, the speakers stated.

J. B. Snider of the Standards Division, Federal Supply Service, Washington, D. C., which is responsible for establishing standards for the purchase of floor wax among other products, presided at the afternoon session. He advanced a number of basic proposals designed to assure a standard quality water emulsion floor wax. These included a formula type specification; certification of the components to be submitted with bids, and plant inspection during floor wax manufacture. The Government, Mr. Snider said recognizes the disabilities of analyzing floor wax products and prefers a formula type specification which will serve as a guide to assist in making a floor wax meeting certain requirements of water resistance, wearability, etc.

Manufacturers expressed their opposition to publication of the formula of the wax suggested by the government, and also opposed the idea of inspection of plants. They countered with the suggestion that a standard wax sample be used, which manufacturers must meet or better.

It was agreed to appoint an industry committee to study the problem of a specification for a standard water emulsion floor wax. Government representatives agreed to participate with industry in setting up such a specification. A meeting for this purpose is to be called in the near future.

F. E. Irvine Dies

Frank E. Irvine, president of Western Soap & Sales Co., Spokane, Wash., died Apr. 16. It is understood Mr. Irvine's son, R. W. Irvine, is now conducting the business.

Par-Busters' Golf Dates

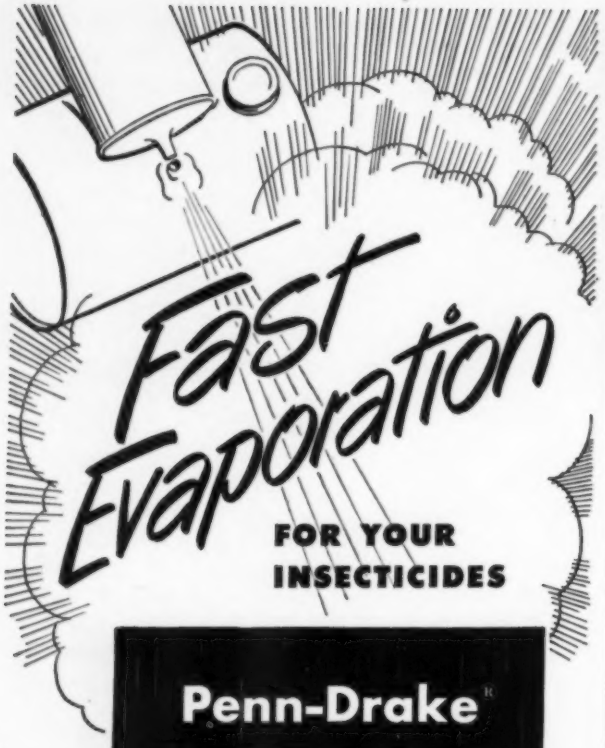
River Forest Golf Club, May 20, is to be the scene of the first 1952 Golf outing of Par-Busters, golf auxiliary of Chicago Perfumery, Soap & Extract Association, Inc., and Chicago Drug and Chemical Association. Other dates and places are: Rolling Green Country Club, June 19; Olympia Fields Country Club, July 16; Elmhurst Country Club, August 15; and Calumet Country Club, September 11.

Hercules Makes Changes

Changes announced recently in the Naval Stores Department of Hercules Powder Co., Wilmington, Del., include the appointment of Emile Pragoff, Jr., as sales manager of rosin and rosin derivatives; C. E. McKay has been named sales manager of terpene liquid products.

Evart E. Mayfield becomes sales manager of Vinsol and related products; George B. Ward., Jr., becomes manager of the Wilmington district office; Arch McLelland is transferred from Detroit to the Dallas district office, and John C. Ball, Jr., is transferred from Wilmington to the Detroit district office.

L. E. Anderson (lower left) was transferred from San Francisco to become manager of the Naval Stores Department of Hercules, it was announced last month. On right is J. H. Heal, Toxaphene sales representative in the Southeast, who was transferred to San Francisco and appointed manager of the Department's district office there.



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SPECIFICATIONS

A.P.I. Gravity	53/55
Specific Gravity at 60° F	0.755/0.765
Saybolt Viscosity at 100° F	29.5/30.5 sec.
Flash Point C.O.C.	130/135
Fire Point C.O.C.	140/145
Initial Boiling Point	330/340
Distillation End Point	430/440
Unsulfonatable Residue	98%
Color	Water white
Odor	Practically none

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Letters

(*From Page* 33)

late lamented GSA Spec. 784b and its equally deficient predecessors.

An interesting observation on the subject is, that of all the thousands of floor wax specifications written by village, town, city, state and the Federal Government; flooring manufacturers, building custodians, janitors, etc., there is no official floor wax manufacturer specification. Can it be that the industry is so immature it is incapable of determining the essential properties for good floor wax performance, or to express this knowledge in specification form?

It is high time that everyone in the industry asked themselves that question and found the answer if they are to hold the respect of the public which uses its products.

A very excellent start was made in this direction in the industry discussions preceding the adoption of GSA Spec. 784b. The test procedures developed in this specification led the industry into a wide field of research and development which has brought great benefits to the industry and its customers. There is, however, one glaring deficiency in this as well as in preceding specifications, that is, the failure to develop an effective measurement for wearability.

The responsibility for writing this specification belongs to the industry; in fact, industry is the only medium qualified to do this job.

This work could commence with a thorough study of GSA Spec. 784b to determine what features should be retained or what should be deleted, simplify some of the present methods of test, and develop a wearability test for floor wax.

A committee should be established for this work by industry and should also include Government officials interested in the subject.

The floor wax industry like many others, undergoes constant change. Introduction of new and better materials and methods, different concepts and ideas, any one of which might necessitate a specification change. Therefore, any committee formed for this purpose should be permanent in order to deal effectively with these problems.

Joseph Green, President,
Oil Specialties & Refining Corp.,
Brooklyn, N. Y.

* * *

Insecticide Vaporizers

Editor:

You are to be congratulated for the logical and sound observations set forth in your editorial on insecticidal vaporizers in the April issue. (S & SC, Apr. 1952, pg. 39.) Obviously the question of concern over insect tolerance is not limited to the automatic vaporizer.

There is, however, a growing concern, and it is a serious matter, over the flagrant abuse of our patented development by irresponsible commercial exploitation. The National Pest Control Association's caution in this latter respect is well founded.

Joseph A. Moran, President,
American Aerovap, Inc.,
New York.

Hudson Issues Catalog

A new catalog and price list were issued recently by H. D. Hudson Manufacturing Co., Chicago. The company's products include compression sprayers, knapsack sprayers, buckets and barrel pumps, "Porta-sprayers," electric sprayers, hand sprayers, hand dusters, and accessories and service parts. The catalog is fully illustrated, and is available on request.

Strattner to N. P. A.

Appointment of Lawrence W. Strattner, administrative vice president of West Virginia Pulp and Paper Co., New York, as assistant administrator, heading the chemical, rubber and forest products bureau was announced recently by the National Production Authority. U. S. Department of Commerce. Mr. Strattner has served as deputy administrator of the bureau since November 1, 1951.

Mr. Strattner succeeds Kenneth H. Klipstein who is returning to his position as assistant general manager of Calco Chemical Division of the American Cyanamid Co., Bound Brook, N. J.

Resistant Fly Study Grant

The Rockefeller Foundation has granted to the University of California Citrus Experiment Station, Riverside, $15,000 to study insecticide resistance in houseflies. Robert L. Metcalf, associate entomologist, heads the project. Scientists at the station have been working on this problem for three years, finding out how much resistance is building up in wild fly populations, developing synergists, and breeding of resistant insects for laboratory tests.

Coconut Patent

(*From Page* 79)

desired the oil may be given a Fuller's earth or activated carbon treatment to remove small quantities of impurities such as color forming material which may be present; no caustic soda or other chemical refining treatment is necessary.

The inventor's claim for newness of the process is as follows: The improvement in the process of producing coconut oil from whole coconuts which comprises steaming the whole coconuts for a period of time sufficient to sterilize the exterior of the coconut shell and to loosen the bond between the coconut shell and the meat, removing the meat from the shell, immediately subdividing the whole meat into chip-like particles having a uniform cross sectional thickness of substantially one-quarter of an inch, contacting the meat particles while maintaining in a quiescent condition with a recirculating flowing stream of dehumidified air maintained at a temperature of between substantially 130° F. and 165° F. for a period of time sufficient to dry the particles partially, then contacting the particles while subjected to a tumbling action with a flowing stream of dehumidified air at an elevated temperature not above 165° F. and for a period of time sufficient to reduce the moisture contained to below five per cent by weight; immediately triturating the dry meat particles to form an oily slurry of coconut meal and separating the coconut oil from such slurry.

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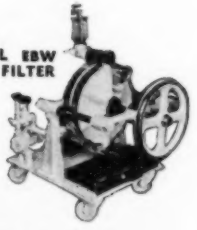

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D-12 Meets

(*From Page 73*)

type in soda ash specification D458.

Discussions were continued in regard to sodium orthosilicate on the basis of a set of proposed specifications presented at the previous day's meeting. The subcommittee was of the opinion that additional consideration should be given to the matter before taking any formal action. This course is to be followed and it is hoped that a set of tentative specifications will be presented at the next meeting. The analytical procedures suggested by the producers will be forwarded to W. H. Koch, chairman of T-4. The chairman of S-4 is Malcolm F. Graham of Colgate-Palmolive-Peet Co., Jersey City, N. J.

Subcommittee G-2, Nomenclature and Definitions, recommended no changes in the definitions as published. They offered a new definition for neutral soap: "Essentially an unbuilt soap substantially free from uncombined alkali or fatty matter." The active ingredient of a synthetic detergent was defined as "its organic surface active material."

Participating in the symposium on "Statistical Methods for the Detergent Laboratory" were Paul L. Schmidt of Westinghouse Electric Corp., Pittsburgh, who presented a paper entitled "Graphical Methods Statistical Analysis and Tests for Significance"; L. Beck of Alexander Smith & Sons Carpet Co., Yonkers, N. Y., who spoke on "Comparison of Variability"; J. R. Sherman and Rubin Bernstein of Philadelphia Navy Yard, who presented a paper on "Statistical Treatment of Detergency Data; G. S. Freeman and M. I. Cohn of American Conditioning House, Inc., Boston, discussed "The Design of Laboratory Control of Commercial Laundries Based on an Analysis of Variance"; J. M. Lambert and E. J. Leshan of General Aniline and Film Corp., Easton, Pa., contributed the paper "The Importance of Correlations in Detergency Testing". O. P. Beckwith of Alexander Smith summarized the papers.

The use of infrared analysis to identify surface active agents was described in a paper by Philip Sadtler of Samuel P. Sadtler & Son, Inc., Philadelphia. In the paper, "Infrared Examination of Surface Active Agents and Synthetic Detergents", Mr. Sadtler pointed out that the "practical wet chemical methods do not always apply and a more definite means of typifying and identifying surface active agents must be found."

"Infrared analysis," he stated, "offers the key to the identification of surface active agents. Infrared spectrometry is an understanding and a relationship between the absorption of infrared light by a molecule and the structure of that molecule. The vibrational modes or characteristic vibrations are measured experimentally by plotting on a chart of percent transmittance versus wave length in microns. The apparatus used to irradiate a sample with successive infrared wave lengths and measure the degree of light absorption by the sample is in an infrared spectrophotometer. The absorption of the infrared light produces molecular specificity because each functional group of the molecule absorbs differently. Wherever there is light absorptio nthere is a characteristic functional group or functional architecture of the overall molecule concerned.

"The infrared spectrum is adapted as the most nearly unique single characterization of a material. To the organic chemist the infrared spectrum is the first choice in unknown identification, in material matching, process tracing and similar operations. It has, therefore, great possibilities in the study of organic portions of surface active agents.

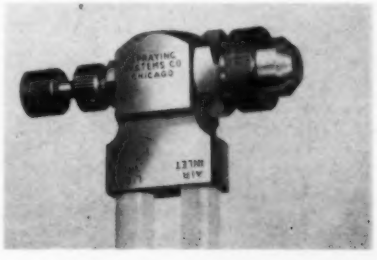
"Qualitative analysis of organic chemical compounds can be made by infrared. The various building blocks in the compound may be identified as O-H, CH_3, C-O, ethylene oxide, sulfonate, long chain fatty radical and many others identified in the infrared.

"Empirical study has shown that characteristic cationic groups, hydroxal, methyl, nitro, carbonyl, aromatic rings and others have definite locations. By applying these data to the spectrum of an unknown an experienced infrared operator can state that certain groups are present and certain groups are not present, thus eliminating a large number of specific chemical spot tests. These particular studies should be coupled with qualitative analysis."

Other papers presented at the meeting were "Methods of Testing Detergents" by E. H. Leonard of Alexander Smith & Sons Carpet Co., Yonkers, N. Y., and "Metal Cleaning Before Electroplating" by Prof. H. B. Lindford of Columbia University. Professor Lindford described a new method for evaluating the effectiveness of degreasing metal surfaces.

New Atomizing Nozzle

A new pneumatic atomizing nozzle was announced recently by Spraying Systems Co., Bellwood, Ill. Designated "⅛ JACN," it has both air and liquid inlets positioned at the top of the nozzle body, at right angles to the direction of spray, and is supplied with shut-off needle. Capacities of these nozzles and the types of spray are determined by the fluid and air nozzle assemblies.



Little Joins Hood Chemical

E. L. Little, formerly a sales executive of Cogate-Palmolive-Peet, Jersey City, N. J., and Jergens Division of Woodbury Co., Cincinnati, has recently been appointed southeastern sales manager of the Hood Chemical Co., Philadelphia.

Continental Names Vincent

Continental Can Co., New York, recently appointed J. N. Vincent to the position of manager of the company's customer's plant layout department, according to W. K. Neuman, director of product sales for the metal division. Mr. Vincent, who has been with Continental since 1933, formerly was administrative assistant to the general manager of the cannery equipment service department.

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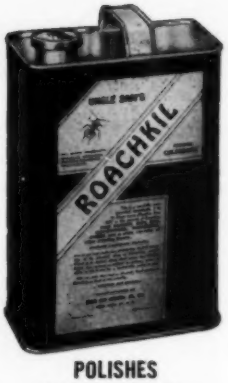

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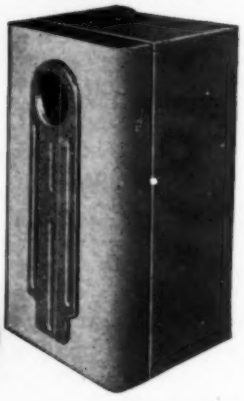

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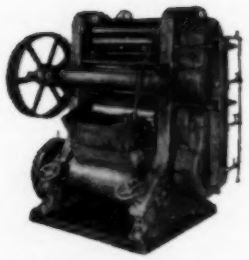

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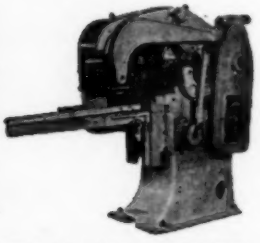

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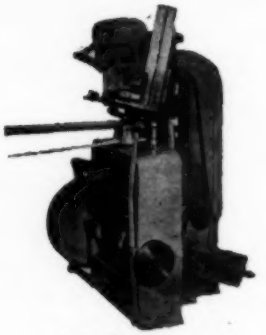

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Positions Open

Soapmaker: All-around soap maker wanted. Give full details first letter. Factory located Pacific Coast. Address Box 533, c/o *Soap*.

Salesmen Calling On Maintenance Trade (Commercial bldgs., institutions, hospitals, industry). If you are selling paper towels, waxes, disinfectants, etc., we have a full line of high-class cleaners which can be sold in conjunction with your present line. Most territories open. Excellent opportunity to increase your earnings. Only experienced men with following apply. State territory in which you are interested. Address Box 534, c/o *Soap*.

Chemist Wanted: Well known manufacturer of sanitary chemicals has opening for a chemist experienced in wax emulsions, disinfectants, soaps, polishes and insecticides. Control, testing and development. Send complete resume of age, education, experience, salary desired. Opportunity with future. Permanent. Located in Metropolitan New York area. Our personnel is familiar with this ad. Address Box 535, c/o *Soap*.

Wanted: Man with experience in compounding dry and liquid cleaners, insecticide, etc., for company handling sanitary and janitor supplies. Also handle shipping and purchasing warehouse stocks. Address Box 536, c/o *Soap*.

Salesman Wanted: To sell complete line sanitary chemicals to institutional and commercial trade in Northeastern territory. Good commissions. Old reliable firm. W. D. Carpenter Co., 111 Irving Ave., Syracuse, N. Y.

Manufacturers Agent: With good following among the wholesale jobber trade to sell several types of mechanics hand soaps. Liberal commission plus incentive bonus. All territories open. Write Box 537, c/o *Soap*.

Toilet Tissue Paper Towel Sales: Established well known paper company offers excellent opportunity for soap or kindred lines man — to sell towels and tissue to same bldgs., hotels, factories, as side line. Low costs insure competitive position. Address Box 549 c/o *SOAP*.

Situations Wanted

Florida Representation: Young soap manufacturer retiring from business, moving to Florida. Desires to be a little active. Address Box 538, c/o *Soap*.

Chemist: Soap, maintenance supplies, toiletries, seeks challenging position — liaison, expediting, investigation, purchasing—the right hand man for a busy executive. Will go anywhere. Address Box 540, c/o *Soap*.

Soapmaker and Chemist: Competent. Having long experience in making of all kinds of soaps and cleaning compounds. Experienced chemist and glycerine recovery. Can take full charge of production. Address Box 542, c/o *Soap*.

Situations Wanted

Perfume Sales: Man with six years' active sales experience in essential oils and compounds in East available. Excellent sales record, best references. For full details, write Box 541, c/o *Soap*.

Soap Plant Manager: Can take full charge all operations small or medium plant making laundry, milled toilet, specialties, etc. Over 20 years practical working experience with three companies. Now employed. Twelve years present job. Fine record, best references. Location immaterial. For full particulars, communicate with Box 539, c/o *Soap*.

Miscellaneous

Wanted: Copies of February 1952 issues of SOAP & SANITARY CHEMICALS. Will you help out technical library urgently in need to complete file. Send to Box 543, c/o *Soap*.

Wanted: A good used Viscolizer or homogenizer. Give size, make, price and condition. Address Box 544, c/o *Soap*.

Wanted: Complete soap or sanitary chemical plants. Also individual items such as crutchers, plodders, mills, mixers, presses, dryers, filling equipment, etc. R. Gelb & Sons, Inc., State Highway No. 29, Union, N. J.

Will purchase Immediately: Pneumatic Packaging Machine, used for chips, powder, cleanser; also dry mixers, chip dryers, crutchers, and automatic soap press. Address Box 545, c/o *Soap*.

Bought - Sold - Traded: Para, DDT, BHC, naphthalene, pyrethrum; other chemicals, oils, waxes, colors, etc. Chemical Service Corp., 92-06 Beaver St., New York 5, Tele.: HAnover 2-6970.

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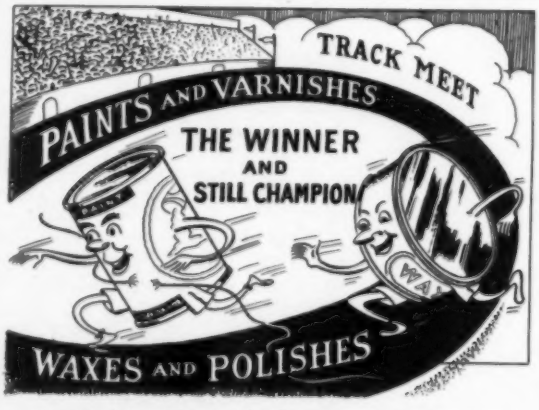

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made with RED SQUILL (Fortified) packed in 4 oz., 16 oz. and in Bulk.

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Soap Plant Wanted: We are now manufacturing over $20,000,000 in various lines and wish to expand by acquisition of assets or stock of one or more industrial companies. In our negotiations the seller's problems and wishes will receive full consideration. Present personnel will normally be retained. Address all replies "Confidential." C. J. Gale, Sec., 233 Broadway, N. Y. 7, N. Y. BA 7-1819.

Wanted: To expedite production—soap-making equipment including kettles, frames, pulverizers, cooling rolls, chip dryers, plodders, cutting tables, evaporators, packaging units. Will consider a set-up plant now operating or shut down. When offering give full particulars. P. O. Box 1351, Church St. Sta., New York 8, N. Y.

For Sale

For Sale: Janitor supply business located in Virginia-West Virginia territory. Clean and profitable operation. Established 12 years. Unusual opportunity for experienced man who wants to go in business for himself, or for company seeking branch in this territory. Address Box 546, c/o *Soap*.

For Sale: 20-bbl. soap crutcher; 600# jacketed horizontal ribbon mixer; 50# to 2000# horizontal ribbon powder mixers. Broughton 50 cu. ft. double arm powder mixer. Steam jacketed steel mixing kettles. Stainless steel steam jacketed kettles. Stainless steel tanks up to 16,000 gal. Shriver 30" cast iron filter press, 35 plates, center feed, open delivery. Perry Equipment Corp., 1410 N. 6th St., Phila. 22, Pa.

For Sale

For Sale: Proctor & Schwartz 6-Fan automatic soap chip conveyor dryer with 48" diam. chilling roll unit. Excellent condition. Address Box 548, c/o *Soap*.

For Sale: Stokes rotary power block press, capable of making a 3" x 4" pill, 250 per mintue—picture available. Chemical & Process Machinery Corp., 146 Grand Street, New York 13. WOrth 4-8130.

For Sale: New 1500# Soap crutcher; cutting table; Jones press; wrapper type S; 3000# crutcher motorized; 3&5 roll mills; 10" plodder; other soap machy. I. E. Newman, 5602 Blackstone Ave., Chicago, Ill.

For Sale: 1—4' x 8' steel flaking or cooling roll; Union Bag sewing machine, 80500 DZ head, M.D.; Sperry 24" Recessed cast iron filter press; Shriver 30" plate & frame C-1 filter press; Sperry 30" aluminum P & F filter press; Munson 2000 lb. rotary batch mixer; 1 - Houchin Perfection jacketed crutcher, 3000#; 1—Std. Knapp self-adjusting gluer-sealer and compression unit; 100 lb. jacketed soap crutcher; 1—Day No. 71S/S Roball Sifters; Size 11, 23, 43 and 53 Rotex screens; Dopp 350, 650 gal. jacketed, open kettles; Jones automatic "K" soap press; 1—Houchin #4 para block press; Mikro No. 1 and No. 2 Pulverizer; 1—Wolf 1800 lb. ribbon blender; 18 Aluminum storage tanks, 800, 600 and 250 gals.; Special—27 unused rectangular 200 gal. aluminum storage tanks at only $75 each plus $15 crating. Only a partial list. Send us your inquiries. We buy your idle machines. Consolidated Products Co., Inc., 15-21 Park Row, New York 38, N. Y. Phone BArclay 7-0600.

For Sale

Are You Posted on SYNTHETIC DETERGENTS and SOAPS & DETERGENTS? see page 120.

For Sale: Proctor & Schwartz 6-Fan automatic soap chip dryer, 2-roll chilling unit, large roll 48" dia. Empire State foot presses. Soap frames. Allbright-Nell 4'x9' chilling rolls. Lehmann 4-roll W.C. 12"x36" steel mill. Houchin 8-1/2"x16" 3-roll and 18"x30" 4-roll Granite stone mills. Kettles and tanks, iron, copper, aluminum and stainless dryers vac. & atmos. Jones automatic soap presses. Slabbers and cutting tables, hand & power. Crutchers. Six-knife chipper. Filter presses 12" to 42". Wrapping & sealing machines. Powder, paste & liquid mixers. Rotex sifters. Filling machines, grinders. Hammer mills. Colloid mills. Three-roll steel mills, 8"x22", 9"x32", 12"x30" & 16"x40". Portable elec. agitators pumps, etc. Send for bulletin. We buy your surplus equipment. Stein Equipment Co., 90 West Street, New York 6, N. Y. WOrth 2-5745.

Latest Book on MODERN CHEMICAL SPECIALTIES . . . see page 120.

To License Vaporizer

American Aerovap, Inc., New York, announced early this month that it is now considering applications for license for the manufacture of vaporizing insect devices under U. S. Patent No. 2,541,637. The validity of this patent was upheld in the U. S. District Court for the Northeastern district of Texas, last month, in a ruling on infringement of the patent.

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R. A. Jones Automatic Soap Press.
Day & Robinson 800, 1500, 2000 lbs. Powder Mixers and Sifters.
Day 20" x 39" 3 Deck, Allis Chalmers, Great Western Sifters.
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"Freon" and its compounds are in free supply it was announced recently by the Kinetic Chemicals Div., E. I. du Pont de Nemours & Co., Wilmington, Del. Substantial stocks in the field due to a favorable raw material supply and improved return flow of containers made possible the discontinuance of the allotment system to govern distribution of the "Freon" series. The system had been in effect since the outbreak of the Korean war.

Advanced by Monsanto

Appointment of Roy L. Brandenburger as assistant to Felix N. Williams, vice president and member of the executive committee, was announced recently by Monsanto Chemical Co., St. Louis, Mo. Mr. Brandenburger, who was manager of the sanitation farm supply division of Ralston Purina Co., St. Louis, joined Monsanto May 1 to work on special marketing problems. A native of St. Louis, Mr. Brandenburger was graduated from Washington University, and had been associated with the Ralston Purina organization for 18 years.

Koppers Fungi Fellowship

Establishment of a fellowship by Koppers Co., Pittsburgh, to determine whether or not various strains of fungi can build up resistance to wood preservatives, was jointly announced recently by the University of Pittsburgh and G. F. D'Alelio, vice-president and manager of Koppers research department. The work will be under the direction of Dr. Kenneth Wertman, professor of bacteriology in the Department of Biological Sciences. He also serves the Koppers research department as a consultant. Koppers will financially support the fellowship to the extent of $5000 for one year.

Diversey Promotes Rainey

W. G. Rainey, since 1944 manager of the Nashville sales district of Diversey Corp., Chicago, has recently been named assistant manager of the southern division by W. E. Noyes, vice-president in charge of sales. J. K. Bradford is division manager. Mr. Rainey is a veteran of the selling field,

W. G. RAINEY

having started his career in 1918. He has been with Diversey for nearly 15 years.

Glyco Names Roberts V.P.

William H. Roberts, Jr., was recently elected vice-president in charge of operations by Glyco Products Co., Brooklyn. A graduate in chemical engineering from Massachusetts Institute of Technology, he has a master's degree in business science from Harvard. Prior to joining Glyco as general plant manager in 1947 he was connected with Hooker Electrochemical Co., Niagara Falls, N. Y., and E. R. Squibb & Sons, New York.

New Aero Fogging Machine

A new electrical insecticide fogging machine was announced recently by Aero Sanitation Co., St. Louis, which dispenses insecticides in the form of a dry fog. Operation of the "Aero-Master" does not require a trained operator. The machine is placed in the area to be treated, timer is set, and the machine turned on. The timer automatically turns off the machine. It treats an area of 10,000 cubic feet per minute for flying insects, and 1,000 cubic feet per minute for crawling insects, according to a pamphlet issued by the company. Fog will remain suspended in the air in a tightly closed area for up to four hours.

Study Mosquito Resistance

Mosquitoes are definitely more resistant to DDT, but not noticeably resistant to newer insecticides such as lindane, chlordane, and BHC, according to a recent report of the Bureau of Entomology and Plant Quarantine of the U. S. Department of Agriculture. The report is based on tests conducted by the Bureau during the past year in the heavy mosquito breeding areas of Florida and California.

For general area-wide control, the entomologists recommend less dependence on chemical sprays and dusts and more reliance on permanent control methods, such as draining and filling mosquito breeding areas, and stocking bodies of water with fish that feast upon the mosquito larvae.

They encourage less extensive use of chemical insecticides against mosquito larvae if it is practical to direct control efforts against adult mosquitoes. Resistance seems to build up more rapidly when insecticides are used on larvae rather than adult mosquitoes. In general the report cautions against complete dependence on insecticides to control mosquitoes.

Chem. Club of N. E. Elects

The Chemical Club of New England held its annual meeting last month at the Parker House, Boston, where it elected the following officers: president, Raymond B. Anthony, Solvay Sales Division, Allied Chemical & Dye Corp.; vice president, Howard C. Cookingham, D. H. Litter Co.; secretary, Edward C. Richardson, U. S. Industrial Chemicals, Inc.; treasurer, Henry C. Milton, American Cyanamid Co.; M. Ellsworth Nourse, Howe & French, Inc., was elected a director for three years.

The following committee chairmen were elected: entertainment, Richard E. Nippes, Columbia Southern Chemical Corp.; publicity, Bernard L. Landers, Philipp Brothers Chemicals, Inc.; auditing, A. Mosher Cooke, Commercial Solvents Corp. Howard C. Bates announced that after 35 years in the chemical industry he was retiring in June, and was unanimously elected an honorary member of the club.

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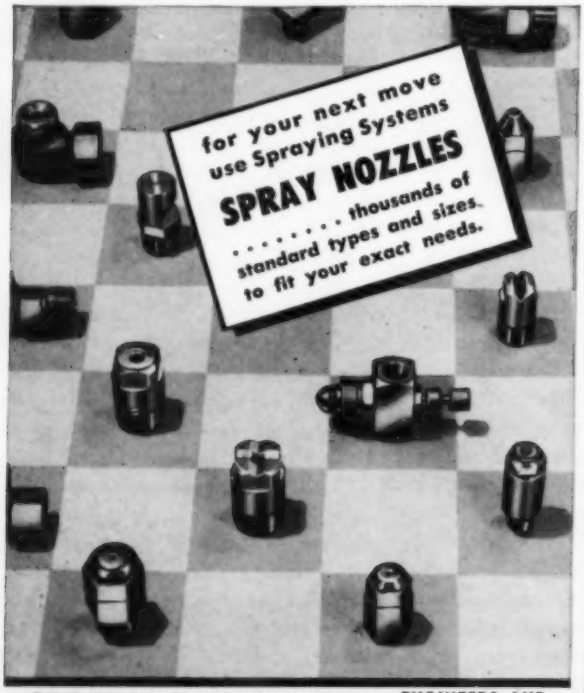

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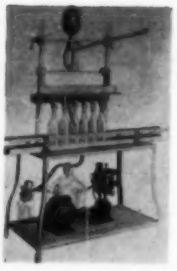

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Tale Ends

IF THE stories which we hear about how bad business is in and around the soap, disinfectant, floor wax, etc. factories, we look forward any day now to seeing some of our friends standing on street corners shaking tin cups. In fact, we are considering seriously offering a nice new shiny tin cup as a subscription premium.

* * *

Don't wash your kids too much, according to the advice of Dr. C. Leonard Williams, dermatologist of Barking, England. Once a day a good going over with soap and water is enough, says the eminent doctor. Too much scrubbing removes the natural germ-killing oils from the skin. Knowing the spirited resistance of the average 10-year-old male to being washed upon most occasions, we imagine that the words of Dr. Williams have already been thrown into the teeth of many harassed parents in England and elsewhere.

* * *

The kraut and pickle packers of America held their annual meeting recently at Lansing, Mich., according to an item in the D & O News, published by Dodge & Olcott, Inc., New York. The association president's annual address was entitled "The Pickle Picture for 1952." Forty technical papers on pickles were delivered. But, not one of them by anybody named Dill. We felt that our readers would be interested in this significant piece of news.

* * *

George Riches and Al Nelson, the Madison Av., N. Y. chemical tycoons who run Riches-Nelson, Inc. apparently spend most of their time commuting to Europe. Right now, Nelson is in Amsterdam, European headquarters for R-N, and Riches is in N. Y. Last month, it was vice versa. Next month, when Nelson gets back to N. Y., Riches will be gone again. Guess where. They deny that they are deliberately avoiding each other.

* * *

First premiums ever offered to sell soap, so it was brought out at the recent premium show, were by B. T. Babbitt, Inc., New York, to push the sale of Babbitt's Best Soap. And that was over 100 years ago,—back in 1851 to be exact. Soapers are still the leading users of premiums.

* * *

For use in laundering ladies' pink pants, slips, stockings, etc., Electro-Chemical Products Corp., East Orange, N. J., has developed "Nul," a product to ban static electricity from nylon, dacron, orlon, and other synthetic fibers. Everybody knows how static can build up in such garments to an uncomfortable and embarrassing degree at times. Maybe the bloke who was slapped for pinching the blond you-know-where was unjustly chastised for something he didn't do. Maybe it was just static. "Nul" should be a boon in helping to prevent situations of this sort.

Hold your hats, bacteriologists! The human mouth can be disinfected. And we quote Dr. William Brady, the syndicated newspaper columnist on matters of health: ". . . no mouth wash or dentifrice available today is more efficient for cleansing and disinfecting mouth or teeth than plain soap and water." Comb that one out of your whiskers, you scientists. Sure, it's the bunk, but try to convince the people who have been reading this Brady's column for fifty years. We wonder if the old boy still writes this stuff himself. If so, we suggest that he watch his language. It's very careless.

* * *

Among the items of importance announced from Washington of late comes the startling news that wigs and toupees have been made exempt from price controls by OPS. Although history fails to show any record of a runaway market in toupees, who is to say that such could not happen? The sinister possibility of graft paid by hair tonic manufacturers raises its ugly head to leer at those bald blokes who have been buying hair ready-made and marcelled instead of growing their own.

* * *

Influx of foreign soap manufacturers into Venezuela, Colombia and Brazil both by establishment of plants and increased importation chiefly of detergents has hit many local soap manufacturers a hard blow during the past year. Some small soap factories have suspended operations and a few processors of vegetable oils and animal fats have ceased producing soap from foots and other by-products. Soapers in coastal areas have suffered most from this new competition, those in the interior are not feeling its effects fully as yet. Increasingly prominent in this South American market during 1951 were two big-name American detergents.

* * *

Between 1936 and 1950, 222 firms spent a million bucks per annum for advertising for one or more years, said Printers' Ink. Top spender in this group as we all know was P & G who led the parade with something over $300,000,000 for the fifteen years in six media. General Motors was next and General Foods third. By industries, soaps, cleansers, toilet goods topped the list with a 15-year total of $1,629,425,200. Foods and beverages were second; automobiles third. And it's all a lot of moola.

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